TURKISH ASSOCIATION OF ORAL AND MAXILLOFACIAL SURGERY

TAOMS'24

31st INTERNATIONAL SCIENTIFIC CONGRESS

09-13th OCTOBER 2024

XANADU ISLAND BODRUM

PROCEEDING BOOK

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6th YOUNG TAOMS SYMPOSIUM

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Netherlands

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Egypt

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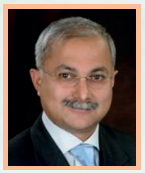
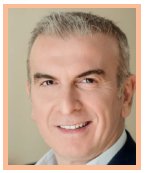


Dr. Sanjiv NAIR
India



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Dr. Stefaan BERGE
Radboud University
Netherlands

CV

Prof. Dr. Dr. Stefaan J. Bergé received his education in Leuven (dentistry and medicine), Saarbrücken (oral and maxillofacial surgery), and Bonn (plastic and reconstructive facial surgery). He also completed a six-month internship in Detroit and Dallas, specializing in cleft and craniofacial surgery. Since 2005, he has been a professor at Radboud University Nijmegen and head of the Department of Oral and Maxillofacial Surgery. He is the founder of the 3D Lab Nijmegen and chairman of the Nijmegen Cleft and Craniofacial Center. Prof. Bergé has authored more than 300 peer-reviewed publications, published several books, and given hundreds of international lectures around the world. He has won various international awards and supervised more than 25 PhD dissertations. In 2016, he was named the best trainer in the Netherlands. He has been elected as the president of the European Association for Oral and Maxillofacial Surgery (2026). In his free time, he builds musical instruments and enjoys making music.

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Dr. Amir ELBARBARRY
Faculty of Medicine - Ain Shams University
Egypt

CV

Amir Elbarbary is a Consultant Aesthetic & Craniofacial Surgeon. He currently holds the academic position of Professor of Plastic, Burns & Maxillofacial Surgery at Ain-Shams University, Cairo-Egypt & leads the maxillofacial unit at the same department. He received his training at Ain-Shams University, did a two-year fellowship at the University of California– Los Angeles and obtained his Doctorate degree in plastic surgery under the Joint Supervision of both niversities. In addition to being an active member of the Egyptian Society of Plastic & Reconstructive Surgeons, the International Society of Aesthetic Plastic Surgery, the International Society of Craniofacial Surgery, and the International Confederation for Plastic, Reconstructive & esthetic Surgery he is also an International Member of the American Society of Plastic Surgeons, & the American Society of Maxillofacial Surgeons; he has been elected as the current Chair of AOCMF International Board & served as immediate Past-Chair of AO CMF Middle East & Northern Africa Board. He is very passionate about teaching and education hence attending several educational programs for Faculty development and traveling internationally & regionally to present several abstracts & invited presentations in both areas of aesthetic & craniofacial surgery. He has several articles in aesthetic & craniofacial surgery published in indexed international journals. He served as one of the International Editors of FACE; the Journal of American Society of Maxillofacial Surgeons & American Society of Craniofacial Surgeons, and as Assistant Regional Editor for Middle East for the Journal Craniomaxillofacial Trauma & Reconstruction for three years till 2015 and is currently a member of the Editor's Review Panel for the same journal, its on-line version as well as the Journal of Egyptian Society of Plastic & Reconstructive Surgery. He is both a supervisor & an examiner of Plastic Surgery Masters & Doctorate Theses/Dissertations, and serve as an Examiner at the Egyptian National Promotion Committee for Plastic Surgery University Faculty Members.

ABSTRACT

The nose is the most prominent facial feature giving its characteristics & can be affected in a variety of CMF patients like in cleft lip nose & post traumatic deformities. While rhinoplasty represents one of the most challenging procedures in facial surgery, the procedure has to be individualized. Analysis of nasal deformity and functional problems in the CMF patient are key in determining the plan of management. Asymmetric bony osteotomies & septoplasty are required to correct deviation along with spreader graft or flap to maintain nasal valve integrity. Non-anatomical alar rim & batten grafts improve airway & smoothen the sidewalls.

Analysis for imbalance between nose and facial skeleton is key in achieving an aesthetically pleasing and a balanced profile. Rhinoplasty can be can be carried out simultaneously when properly indicated to enhance orthognathic surgery outcomes. When rhinoplasty is not indicated, contouring piriform rim, trimming septal cartilage & ANS, creating a trough in the nasal floor, partial turbinectomy, alar base cinching, & V-Y closure are key surgical steps during Le Fort I procedures to control nasal changes ensuring better aesthetic outcomes while avoiding unfavourable changes.

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Dr. Simon ENZINGER
University Hospital Salzburg
Austria

CV

I started my training in Salzburg in 2007. The clinic has always been regarded as technically innovative. From the very beginning, I was able to work with new procedures and techniques. I was appointed managing senior physician in 2017 and can now drive forward technical innovations myself. I have been working with 3D printing since 2011. Initially, the models were produced externally. In 2015, the first 3D models were printed at the department, the indications for 3D models were steadily expanded and the machinery was increased so that we now operate 7 3D printers at our clinic. since 2023, PEEK implants have also been printed. I was also significantly involved in this project as project manager. The next exciting projects are already being planned so that innovation will continue to be pushed forward in Salzburg in the future.

ABSTRACT

In house production of PEEK Implants in Cranio-facial reconstruction

Objectives:
3D models are used for planning, clarification, training and teaching. Thanks to 3D printers, preparatory work for operations has also become quick, easy and inexpensive. Now 3D printing is entering the next round. Patient-specific implants (PSI) can now be produced and implanted in a 3D printer within the department. The aim of the presentation is to provide an overview of the steps required for this.

Material and methods:
Our path was a co-operation with 2 partners. On the one hand the manufacturer of the printer and on the other hand an external QM company that validates and documents all necessary steps for quality assurance. Firstly, 2 areas need to be defined. Firstly, the authorisation process, i.e. everything that is necessary to be allowed to print the first implant, and the process that affects each subsequent implant. Not only was the material checked again for bioavailability, but the slicing software, the design software and the printing software were also precisely defined, as were staff training, the location of the materials, the worker protection measures and the storage for the files. The traceability of the material is standardised, as is the processing of the printed implant, its labelling and sterilisation in the central hospital sterilisation department. After validation, the standardised workflow for manufacturing an implant can begin. This workflow must be reproducible and repeatable in all areas.

Results:
The implant has to be within the defined parameters. The next step is a high-resolution CT scan. The quality of the imaging and the ordering process are already specified. The medical technicians support the department's team and operate the software. This is followed by technical approvals and documented confirmations of the individual process steps. The implant must be printed again as a model and approved before it can be produced using a PEEK printer. The support structures are then removed in post-processing using defined instruments and the implant is washed and sterilised. This is followed by final acceptance and handover of the PSI to the surgical team, including all the necessary paperwork.

Conclusion:
It is possible to manufacture PSI in your own department. Less information is lost due to better communication between technician and surgeon, and the patient benefits from higher implant quality. Due to the lower costs, more patients can be treated with PSI.

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Dr. Manlio GALIE
St. Anna University Hospital of Ferrara
Italy

CV

Manlio Galiè is clinical Professor at the St. Anna University Hospital of Ferrara, Head of the Department of Cranio Maxillo Facial Surgery.

He has completed formal training in both Medicine MD and Dentistry DMD.

He specializes in Maxillo-Facial Surgery and in ENT Surgery.

Dr. Galiè has lectured as invited speaker to numerous Seminars, Meetings, Roundtables and Congresses in Italy, Europe, and Worldwide.

Author of over 70 publications in National and International Journals he is a Member of the Editorial Board of the Journal of Cranio-Maxillofacial Surgery

(Official Pubblication of the European Association for Cranio-Maxillofacial Surgery – EACMFS), of the Journal of Craniomaxillofacial Trauma and Reconstruction (Official Membership Journal of AO CMF) and Se International Fellow at University of California, Los Angeles (UCLA), Craniofacial Center.

Fellow of the European Board of Oro – Maxillo – Facial Surgery (FEBOMS)

Honorary Fellow of the American Association of Oral and Maxillofacial Surgeons (FAAOMS)

Past Education & Training Officer of the European Association for Cranio-Maxillo-Facial Surgery (EACMFS) 2014-2020

Past President of the European Association for Cranio-Maxillo-Facial Surgery (EA Member of the European Clinical Networks: EUROCRAN and ORPHANET.

Member of the following Associations: EACMFS (European Association for Cranio-Maxillofacial Surgery), SILPS (Society for Cleft Lip and Palate and Craniofacial Malformation Study and Treatment), SICMFS (Italian Soci Interested in new innovations in cranio-maxillo-facial surgery his special interests are in craniofacial surgery, orbital surgery, reconstructive surgery and total facial rehabilitation, orthognathic surgery, cleft surgery, tumor surg

ABSTRACT

Basilar skull fractures can involve critical neurovascular structures and present with clinical signs and symptoms that must be promptly recognized.

The Maxillofacial surgeon is an essential component of the multidisciplinary team for the diagnostic and therapeutic timing. The purpose of the lecture is to highlight the role of the maxillofacial surgeon with his skills in the management of patients with cranio

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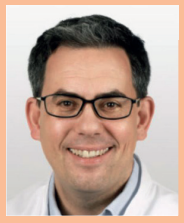

Dr. Max HEILAND
University Hospital Charite Berlin
Germany

CV

Prof. Dr. med. dent. Max Heiland is a highly experienced oral and maxillofacial surgeon with a career spanning 26 years. He works at the Department of Oral and Maxillofacial Surgery at the University Hospital Charite Berlin.

Dr. Heiland's impressive CV showcases his extensive education and qualifications. He completed his pre-clinical medical studies at the Johannes Gutenberg University in Mainz and clinical medical studies at the University of Hamburg. He went on to earn medical and dental doctorates, as well as a specialist title in oral and maxillofacial surgery. Additionally, he is a Fellow of the European Board of Oro-Maxillo-Facial Surgery.

With over 400 scientific publications, Dr. Heiland is actively involved in research and advancing his field. His publications cover a wide range of topics, including using antibiotics in immunotherapy for head and neck carcinoma, the development of biomaterials for bone substitutes, and the application of deep learning algorithms in dental radiographs.

Dr. Heiland's expertise and dedication to his profession make him a highly respected and sought-after oral and maxillofacial surgeon. He is known for his innovative approaches and contributions to the field. Patients can trust his vast knowledge and experience to deliver exceptional care and the best possible outcomes for their oral and maxillofacial surgical needs.

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Dr. Nicholas KALAVREZOS
University College London Hospitals
UK

CV

Nicholas Kalavrezos is a Senior Head and Neck Reconstructive Surgeon in the Head and Neck Centre at University College London Hospital with a background in Oral and Maxillo-Facial surgery.

Nicholas is also the Lead Head and Neck Sarcoma Surgeon for the London Sarcoma Service. His clinical practice includes ablative and reconstructive surgery for the head and neck with a special interest in bone sarcomas and functional outcomes following reconstructive surgery. His clinical practice also includes surgical treatment of salivary gland tumours as well as thyroid surgery. Nicholas' research interests include applications of "tissue engineering" in head & neck reconstruction. Nicholas is a founding member of the "Centre for Reconstructive Surgery" at University College London and holds a Senior Lecturer post at the same Institution. He is also a member of the "Face Transplant Group" based at Royal Free Hospital aiming to perform the first face transplant in the UK.

He has joint research projects in the Nanotechnology Lab of UCL on "tissue engineered bio-scaffolding" aiming to replace defects of the head and neck with tissue– engineered based micro-vascular flap reconstruction. The FORTE flap is a paradigm to this direction. Nicholas lectures regularly at national and international meetings and holds the position of the President Elect at the Executive Board of the European Association for Cranio-Maxillofacial Surgery (EACMFS).

ABSTRACT

TO BE CONFIRMED - TRENDS AND CHALLENGES IN FLAP-BASED IMPLANT REHABIITATION IN MAJOR HEAD AND NECK ONCOLOGY

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Dr. Ashraf MESSIHA
St George's University Hospitals
UK

CV

Mr Ashraf Messiha is a Consultant Maxillofacial Surgeon at St George's University Hospitals NHS Foundation Trust. He qualified in dentistry and medicine and trained in Oral and Maxillofacial Surgery at St George's Hospital, Northwick Park Hospital (Imperial), Kent and Canterbury University Hospital, Queen Victoria Hospital (East Grinstead), and the Royal Surrey County Hospital. Mr Messiha passed the FRCS exam in oral and maxillofacial surgery and subspecialised in facial deformities. He also undertook training in facial aesthetics in particular facial reanimation and septorhinoplasty.

Mr Messiha has remarkable working experience. He first was a Consultant at Northwick Park Hospital and St Mary's London University Hospital where he developed services in Post Traumatic Facial Deformity and was a Lead in facial trauma surgery as well as facial skin cancers and orofacial rehabilitation. Subsequently, MR Messiha moved to St George's Hospital, Ashford and St Peter's Hospitals and is now a core member of the Cranio-Orbito-Facial Deformity Multidisciplinary Team as well as the Joint Orthognathic team. He is actively involved in teaching and is the Educational Lead for Pan London Oral and Maxillofacial Faculty at the London Deanery.

Mr Messiha specialises in facial deformity, orthognathic surgery, TMJ surgery and replacements (which he leads), rhinoplasty and obstructive apnoea surgery. He is also an expert in oral surgery and implantology, placement of zygomaticus implants and multiple implants in complex cases.

Mr Messiha has a keen interest in clinical research and has supervised numerous projects in surgical anatomy.

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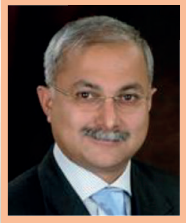

Dr. Sanjiv NAIR
Association of Maxillofacial surgeons of India
India

CV

Prof. Sanjiv Nair graduated from the Trivandrum Medical College, Kerala in the year 1987. He completed his post graduate degree in Oral and maxillofacial surgery from the same institution in 1990, passing out with distinction.

Prof. Nair served as a faculty in the College of Dental surgery, Kasturba Medical College between 2000 and 2004. He trained as Registrar in Maxillofacial surgery at the North Manchester General from 1994 to 1997 during which time he successfully completed the FFD RCS (Ireland).

He is presently professor and head of department, oral and maxillofacial surgery, Bangalore Institute of Dental Sciences. Surgical Consultant at Columbia Asia hospitals and B.M Jain Hospitral, Bangalore. Prof. Nair was the Editor in chief of the Journal of Maxillofacial and Oral Surgery.

Prof. Sanjiv Nair currently is the executive member of the International association of maxillofacial surgeons and president Elect of the Association of Maxillofacial surgeons of India. He has several international and national presentations and publications in Orofacial malignancies and Vascular lesions apart from contribution to the textbook of Maxillofacial surgery by Peter Ward Booth, Schendel and Hausemen.

Prof. Nair is a faculty for hands on training in head and neck surgery at the national level His surgical interests are ablation and reconstruction of head and neck tumors. Surgical management of vascular lesions. Aesthetic facial surgery and traumatology.

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Dr. Christos PERISANIDIS
University of Athens
Greece

CV

Dr. Christos Perisanidis is currently serving as Professor and Head of the Department of Oral and Maxillo-facial Surgery at the University of Athens in Greece. He obtained his Habilitation (Venia Docendi) in Oral and Maxillofacial Surgery from the Medical University of Vienna and his PhD in Dentistry from the Univer-sity of Athens.

Dr. Perisanidis has served as Associate Professor in Oral and Maxillofacial Surgery at the Medical Univer-sity of Vienna. He has held various positions of leadership and expertise throughout his career, including Director of the Tumor Outpatient Unit, Director of the Head and Neck Oncology Tumor Board, and Direc-tor of the Section of Oral and Maxillofacial Oncology and Microvascular Surgery at the same Institution. In addition, he is Scientific Director of the International Master Program in "Master in Clinical Dentistry - Periodontology and Implantology" at the University Clinic of Dentistry, Medical University of Vienna. Prof. Perisanidis has contributed significantly to the field through his research and publications, collabo-rating with international research groups and authoring numerous peer-reviewed articles in prestigious medical journals. His expertise lies in the areas of Head and Neck Cancer, Microvascular Surgery, Dental Implantology and Facial Plastic Surgery. He has also played key roles in education and training, presently serving as the Education and Training Officer for the European Association of Cranio-Maxillofacial Surgery.

Prof. Perisanidis has demonstrated his leadership abilities by organizing world-class courses at the Center of Anatomy of the Medical University of Vienna and actively participating as a plenary lecturer, keynote speaker, and chairman at various international courses and conferences.

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Dr. Chingiz RAHIMOV
Azerbaijan Medical University
Azerbaijan

CV

Head of Department of Oral & Maxillofacial Surgery of Azerbaijan Medical University. President of Azerbaijan Society of Oral and Maxillofacial Surgeons. Vise-President of International College for Maxillofacial Surgeons. Experience (years): 44 -of hands-on practice ,41- of scientific research and 30 - of teaching experience. Over 180 published articles, H index=7. Autor: English-Azeri-Russia Explonatory Stomatological Medical Dictionary. Councillor from Azerbaijan in EACMFS. Have trained 12 PhD specialists. Research area: Cranio-maxillofacial reconstructive surgery Have trained 12 PhD specialists.; TMJ surgery; Orbital reconstruction, Panfacial trauma management; Head and Neck Oncology; Advanced dental implantology.

Dr. Perisanidis has served as Associate Professor in Oral and Maxillofacial Surgery at the Medical Univer-sity of Vienna. He has held various positions of leadership and expertise throughout his career, including Director of the Tumor Outpatient Unit, Director of the Head and Neck Oncology Tumor Board, and Direc-tor of the Section of Oral and Maxillofacial Oncology and Microvascular Surgery at the same Institution. In addition, he is Scientific Director of the International Master Program in "Master in Clinical Dentistry - Periodontology and Implantology" at the University Clinic of Dentistry, Medical University of Vienna. Prof. Perisanidis has contributed significantly to the field through his research and publications, collabo-rating with international research groups and authoring numerous peer-reviewed articles in prestigious medical journals. His expertise lies in the areas of Head and Neck Cancer, Microvascular Surgery, Dental Implantology and Facial Plastic Surgery. He has also played key roles in education and training, presently serving as the Education and Training Officer for the European Association of Cranio-Maxillofacial Surgery.

ABSTRACT

The features of wound healing in dental implantology, complications and their managment.

Introduction.

Unsuccessful results in dental implantation may be related to surgical complications of peri-implant tissues. Aid. Prevention and treatment of complications by studying the characteristics of the biological processes of surgical wounds in soft tissues in the area of the installed implant to improve the results of dental implantation.

Material and methods.

The study consisted of 3 stages: 1) meta-analysis of scientific literature; 2) studying the healing process of surgical wounds in an experiment; 3) development of effective methods for treating surgical wounds in the clinic.

Results.

Regeneration of soft tissue in the area of the installed implant is better when implanted immediately after tooth extraction. Resveratrol - has a positive effect on tissue healing in the surgical wound during dental implantation.

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Dr. Majeed RANA
Heinrich-Heine-Universität Düsseldorf
Germany

CV

Head of Department of Oral & Maxillofacial Surgery of Azerbaijan Medical University. President of Azerbaijan Society of Oral and Maxillofacial Surgeons. Vise-President of International College for Maxillofacial Surgeons. Experience (years): 44 -of hands-on practice ,41- of scientific research and 30 - of teaching experience. Over 180 published articles, H index=7. Autor: English-Azeri-Russia Explonatory Stomatological Medical Dictionary. Councillor from Azerbaijan in EACMFS. Have trained 12 PhD specialists. Research area: Cranio-maxillofacial reconstructive surgery Have trained 12 PhD specialists.; TMJ surgery; Orbital reconstruction, Panfacial trauma management; Head and Neck Oncology; Advanced dental implantology.

Dr. Perisanidis has served as Associate Professor in Oral and Maxillofacial Surgery at the Medical Univer-sity of Vienna. He has held various positions of leadership and expertise throughout his career, including Director of the Tumor Outpatient Unit, Director of the Head and Neck Oncology Tumor Board, and Direc-tor of the Section of Oral and Maxillofacial Oncology and Microvascular Surgery at the same Institution. In addition, he is Scientific Director of the International Master Program in "Master in Clinical Dentistry - Periodontology and Implantology" at the University Clinic of Dentistry, Medical University of Vienna. Prof. Perisanidis has contributed significantly to the field through his research and publications, collabo-rating with international research groups and authoring numerous peer-reviewed articles in prestigious medical journals. His expertise lies in the areas of Head and Neck Cancer, Microvascular Surgery, Dental Implantology and Facial Plastic Surgery. He has also played key roles in education and training, presently serving as the Education and Training Officer for the European Association of Cranio-Maxillofacial Surgery.

Dr. Marina Morante SILVA
UF Health Oral and Maxillofacial Surgery
ABD

CV

Dr. Morante Silva is an Assistant Professor in Department of Oral and Maxillofacial Surgery Division of Head and Neck Surgery Microvascular Reconstructive Surgery at University of Florida College of Medicine – Jacksonville, whose specialties include head and neck surgical oncology, reconstructive and microvascular surgery. She is Fellow of the European Board of Oral and Maxillofacial Surgery and Head and Neck Surgery. Dr. Morante Silva obtained a Master from the University of Alcala. She obtained her Medical Degree from the University of Valladolid, Spain where she also completed the residency program in oral and maxillofacial surgery. She then pursued additional training completing a fellowship in head and neck surgical oncology and microvascular reconstruction at the University of Florida Jacksonville in US.

Dr. Morante Silva is a member of the Educational Committee of IAOMS. She is also a member of the AAOMS, SECOMCyC, IMC and EACMFS .

ABSTRACT

Advances in Mandible Reconstraction, jaw in a day

Mandibular defects following ablative surgery not only present an unique reconstructive challenges to head and neck surgeons, but also it has an impact in the patient life. The goal of the reconstruction surgery is to provide functional and cosmetic restoration of the native tissue and structures. Vascularized osseous and soft tissue reconstruction options are common ways to reconstruct this defects and cover those specific needs, The fibula is the most common osseous flap and because of its characteristics as dense, thick cortical bone, can accommodate dental implants and support prostheses. The combination of bone flaps, dental implants and dental prosthesis in the same surgery is known as "jaw in a day", described many years ago, it has being utilized more in the previous 2 years, most commonly on mandibular reconstruction after benign tumor ablation surgery. This technique can be apply as well in the maxilla, and although controversy, it can potentially be done after malignant tumors resections. The advent of CAD-CAM technology and patient-specific implants in combination with a temporary dental prosthesis, offers a novel reconstruction alternative. This method allows for precise adaptation to patient anatomy, reducing the surgical time and allow more precise bony reconstructions, this led in the possibility to have in the same day all the reconstruction including teeth reducing in that way the need for multiple surgeries and thereby expediting a complete functional recovery and improving the patient satisfaction.

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Dr. Orcan YÜKSEL
Frankfurt Johann Wolfgang University
Germany

CV

Dr. Yüksel graduated in 1987 from the Johann Wolfgang Goethe University in Frankfurt and the Istanbul University. He got his doctor degree at the University of Frankfurt / M.

He has been working in his own practice since 1993. Here he also has a training center where he trains dentists from all over the world in the field of oral implantology.

He is a certified implantologist and trainer for implantology from the European Association of Dental Implantologists (BDIZ / EDI).

He is also a diplomat for the International Congress of Oral Implantologists (ICOI). From 2008 he started developing the "Bone Ring Technique" project.

ABSTRACT

Esthetic considerations related to bone and soft tissue maintenance and development around dental implants

An implant-borne restoration in harmony with the surrounding hard and soft tissue requires optimal bone and soft tissue conditions at the time of implant placement or subsequent augmentation. The predictability of aesthetic success is contingent upon the extent of tissue loss present at the start of treatment. Accurate diagnosis and appropriate treatment planning are critical to achieving a successful outcome.

Aesthetic restoration of anterior teeth with implant-supported restorations is one of the most challenging procedures to perform. Aesthetic outcomes in the anterior zone depend on numerous variables. The aim of this lecture is to provide correct guidelines and demonstrate the limitations of implants, ranging from ideal conditions to severe cases with significant tissue loss. The discussion will cover materials and techniques as well as the biological principles involved.

Bone resorption following anterior tooth extraction often compromises gingival tissue levels for implant restoration. To address volume loss, implants with augmentation serve as highly effective treatment. If the tooth to be replaced has not yet been extracted, several assessments should be made prior to the extraction.

Aesthetics is a primary reason why patients choose dental implants for their treatment. However, achieving aesthetics with implant restorations is considerably more challenging than with conventional restorations. According to the treatment protocol, additional time and costs may be required. Clinicians must also understand the patient's desires. A high smile line presents significant challenges in planning implant-supported restorations in the aesthetic zone, as both the restoration and gingival tissues are fully displayed. In such clinical situations, maximal efforts to maintain peri-implant tissue support throughout the planning, provisional, surgical, and restorative phases are essential.

Most patients lack sufficient knowledge to comprehend the necessary steps for an aesthetic tooth replacement. Therefore, it is important to establish clinical concepts with clearly defined parameters that patients understands and the treatment lead to successful, long-term stability of the peri-implant tissues.

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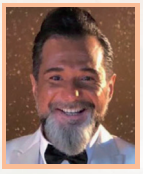

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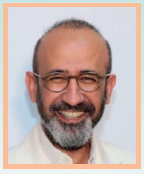

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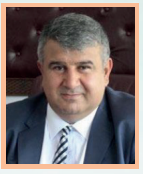

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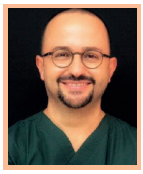

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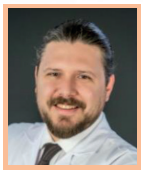

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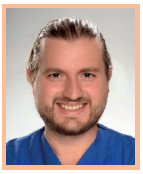

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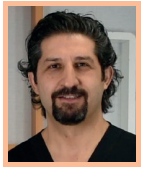

Dr. Faysal UĞURLU

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Dr.Cemal AKAY
Faculty of Dentistry - Ege University

ABSTRACT

Komplike Vakalarda İmplant Uygulamaları

Diş eksikliği tedavisinde dental implant uygulamaları günümüzde tercih edilmektedir. İleri derecede kemik erimesi bulunan vakalarda blok otojen greft ogmentasyonları , yönlendirilmiş kemik rejenerasyonu ve distraksiyon osteogenezis teknikleri tek başına veya kombine olarak uygulanmaktadır. Bu tedaviler implant başarısını olumlu yönde etkilemektedir. Bu sunumda vakalar üzerinde farklı tedavi yöntemleri anlatılacak ve yeni uygulama alanları tartışılacaktır.

Implant Applications in Complicated Cases

Dental implant applications are currently preferred in the treatment of tooth loss. Block autogenous graft augmentations, guided bone regeneration and distraction osteogenesis techniques are used alone or in combination in cases with advanced bone resorption. These treatments positively affect implant success. In this presentation, different treatment methods will be discussed on cases and new application areas will be presented.

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Dr. Belir ATALAY
Faculty of Dentistry - İstanbul University

CV

1976 yılında Zonguldak'ta doğan Prof.Dr.Belir Atalay ilk,orta ve lise öğrenimini TED Zonguldak Kolejinde tamamladıktan sonra 1994 yılında İstanbul Üniversitesi Dişhekimliği Fakültesine girmiştir. 1999 yılında aynı Fakültenin Ağız, Diş, Çene Hastalıkları ve Cerrahisi Anabilim dalında doktora eğitimine başlamış 2006 yılında doktora tezini sunmuştur. 2012 yılı Aralık ayında 'Doçent', 2021 yılında 'Profesör' ünvanını almıştır. Halen İÜ Dişhekimliği Fakültesinde aynı bölümde çalışmalarına devam etmektedir. Prof. Dr. Belir Atalay'ın SCI ve SCI-E kapsamında olan 24 adet uluslararası ve bunun yanında 8 adet te ulusal makalesi bulunmaktadır. 2 adet yabancı bilimsel kitap bölümü yazmıştır. Ulusal Kanser kitabında 1 adet bölümü vardır. 2 Uluslararası 1 ulusal dergide hakemliği vardır. 17 si ulusal 40 'ı uluslararası kongre ve sempozyum katılımı 23 konferans, 13 kurs sunumu bulunmaktadır. 2006 yılında ABD Boston TUFTS üniversitesi, 2017 UIC Chicago Oral&Maksillofasiyal cerrahi kürsülerinde gözlemci olarak ameliyat ve klinik katılımı olmuştur. Zigomatik implantlar ve seramik implantlar konularında Türkiye'deki ilk uygulamacı cerrahlardandır. Türk Oral&Maksillofasiyal Cerrahi Derneği, ACBID, Türk Oral Cerrahi Derneği ve ITI üyelikleri mevcuttur. Prof. Dr. Belir Atalay evli ve 2 kız çocuğu vardır.

Prof. Dr. Belir Atalay was born in Zonguldak at 1976. He was completed his primary, secondary and high school education at TED Zonguldak College and than attended Istanbul University Faculty of Dentistry in 1994. In 1999, he started his PhD education in the Department of Oral & Maxillofacial Surgery at the same Faculty and presented his PhD thesis in 2006. He received the title of "Associate Professor" in December 2012 and "Professor" in 2021. He still continues his studies in the same department at IU Faculty of Dentistry. Prof. Dr. Belir Atalay has 24 international and 8 national articles within the scope of SCI and SCI-E. He wrote 2 international scientific book chapters. There is 1 chapter in the National Cancer book. He is a referee in 2 international and 1 national journals. There are 17 national and 40 international congress and symposium participation, 23 conferences and 13 course presentations. He had surgery and clinical participation as an observer in the US Boston TUFTS University in 2006 and 2017 UIC Chicago Oral & Maxillofacial surgery chairs. He is one of the first practicing surgeons in Turkey on zygomatic implants and ceramic implants. He is a member of Turkish Oral & Maxillofacial Surgery Association, ACBID, Turkish Oral Surgery Association and ITI. Prof. Dr. Belir Atalay is married and has 2 daughters.

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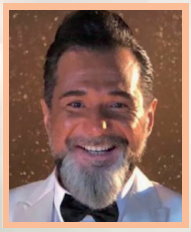

Dr. Barış AYDİL
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Dr. Erol CANSIZ
Faculty of Dentistry - İstanbul University

CV

Erol Cansız 1983 yılında İstanbul'da doğdu. Marmara Üniversitesi Diş Hekimliği Fakültesinden mezun olduktan sonra uzmanlık eğitimini İstanbul Üniversitesi Diş Hekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Anabilim Dalında tamamladı ve aynı bölümde yardımcı doçent ünvanıyla öğretim üyesi oldu. Baş ve boyun cerrahisi alanında eğitim almak amacıyla İstanbul Üniversitesi, Cerrahpaşa Tıp Fakültesi, Kulak Burun Boğaz Anabilim Dalı'nda altı ay süreyle çalıştı. Maksillofasiyal cerrahi alanındaki bilgi ve tecrübesini arttırmak amacıyla Almanya Osnabruck'de, Clinicum Osnabruck Maksillofasiyal Cerrahi Departmanı'nda ve İngiltere Londra'da, St.Georges Medical University Maksillofasiyal Cerrahi Departmanı'nda görev aldı. 2019 yılında Ağız Diş ve Çene Cerrahisi Doçenti Ünvanı'nı alan Erol CANSIZ, 2022 yılında Bezmialem Vakıf Üniversitesi Tıp Fakültesinden mezun oldu. Erol CANSIZ 2019 yılından beri İstanbul Üniversitesi Tıp Fakültesi Ağız Yüz ve Çene Cerrahisi Anabilim Dalında ve ek görevle İstanbul Üniversitesi Dişhekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Anabilim Dalında akademik ve klinik çalışmalarına devam etmektedir.

He was born in Istanbul in 1983. After he graduated from Marmara University Faculty of Dentistry (Istanbul) he finished his specialty training at Istanbul University Faculty of Dentistry (Istanbul), Oral and Maxillofacial Surgery Department and became a faculty member in the same department. In 2015 in order to improve his knowledge and experience on maxillofacial surgery he worked for six months in Istanbul University, Cerrahpasa Faculty of Medicine, Department of Otorhinolaryngology. Also he worked in Osnabruck, Germany, at Clinicum Osnabruck Department of Maxillofacial Surgery, and in London, England, at St.Georges Medical University Department of Maxillofacial Surgery. In 2022 he graduated from Bezmialem Foundation University, Faculty of Medicine and he had medical degree. In August 2019, he received the title of Associate Professor in Oral and Maxillofacial Surgery. Erol CANSIZ has been working in the Department of Oral and Maxillofacial Surgery of Istanbul University Faculty of Medicine since 2019 and with an additional task at the Department of Oral and Maxillofacial Surgery of Istanbul University Faculty of Dentistry, academically and clinically.

ABSTRACT

Gelişen 3 boyutlu tasarım ve üretim teknolojileriyle birlikte ortognatik cerrahi planlamasında da dijital bir dönüşüm meydana gelmiştir. Bu dönüşüm sayesinde daha hassas ve daha doğru cerrahi planlamalar gerçekleştirilebilmekte, konvansiyonel planlama nedeniyle ortaya çıkan sorunlar elimine edilebilmektedir. Bu sunumda ortognatik cerrahideki güncel dijital yaklaşımlar anlatılacaktır.

With the development of 3D design and production technologies, a digital transformation has also occurred in orthognathic surgery planning. Thanks to this transformation, more precise and accurate surgical plans can be made, and issues arising from conventional planning can be eliminated. In this presentation, the current digital approaches in orthognathic surgery will be explained.

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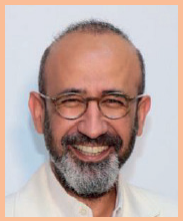

Dr. Burak ÇANKAYA
Faculty of Dentistry - İstanbul University

CV

Dr. Çankaya lisans eğitimini 2000 yılında İstanbul Üniversitesi Dişhekimliği Fakültesi'nde tamamlanmıştır. Mezuniyeti sonrası, 2000 yılında aynı üniversitede Ağız,Diş ve Çene Cerrahisi Anabilim Dalında doktora eğitimine başlamıştır. 2006 yılında doktor ünvanını aldıktan sonra 2012 yılında Doçent, 2021 yılında profesör olmuştur. Halen aynı üniversitede görevini sürdürmektedir. Ulusal ve uluslararası yayınları, SCI ve SCI expanded kapsamında dergilerde bölüm editörlüğü görevleri bulunan Çankaya'nın aynı zamanda hali hazırda 3 dile çevrilmiş Prof.Dr. Korkud Demirel ile birlikte yazmış oldukları "Dişhekimliğinde Dikiş Sanatı" isimli bir de kitabı bulunmaktadır. İlgi alanları; pediatrik oral cerrahi, maksillofasiyal travmatoloji ve dental implantolojide kemik yönetimidir.

Dr. Çankaya completed her undergraduate education at Istanbul University Faculty of Dentistry in 2000. After graduation, he started his doctoral education in the Department of Oral, Dental, and Maxillofacial Surgery at the same university in 2000. After receiving the title of doctor in 2006, he became an Associate Professor in 2012 and a professor in 2021. He still holds his position at the same university. Çankaya, who has many national and international publications department editorial duties in periodicals within the scope of SCI and SCI expanded, also has a book titled "The Art of Dental Suturing," written together with Prof.Dr. Korkud Demirel has already been translated into three languages. His areas of interest are bone management in pediatric oral surgery, maxillofacial traumatology, and dental implantology.

ABSTRACT

İmplant Uygulamalarında Başarının Temelleri

Dental implantlar, eksik dişlerin rehabilitasyonunda standart tedavi yaklaşımı haline gelmiştir. Geçtiğimiz yıllarda implant başarısı, hayatta kalma oranları, protez stabilitesi, radyografik kemik kaybı ve implant çevresi yumuşak dokularda enfeksiyon olmaması ile değerlendirilirdi. O zamandan bu zamana, implant tedavilerinde başarıyı değerlendimek için yeni parametreler tanıtılmıştır. Bunlar arasında implant çevresi yumuşak dokuların doğal ve sağlıklı görünümü, hastanın eşlik eden tıbbi durumları, ayrıca protez parametreleri, estetik ve hasta memnuniyeti yer almaktadır. Hatta günümüzde dikiş malzemeleri ve teknikleri bile başarı için tartışılır hale gelmiştir. Ancak osseointegrasyon kavramı implant diş hekimliğinde baskın parametre olmaya devam etmektedir. Başarı kriterlerinin mevcut tanımının bu ek faktörleri içerecek şekilde kapsamlı olması gerektiği mantıklı görünmektedir.

Fundamentals of Success in Implant Applications

Dental Implants have become the standard care for rehabilitation of missing teeth. Over the past decades, implant success has been assessed by survival rates, continuous prosthesis stability, radiographic bone loss, and absence of infection in the peri-implant soft tissues. Since then, new parameters have been introduced to assess success in the achieving of lifelike implant restorations. These include health status and natural-looking peri-implant soft tissues, co-existing medical conditions, prosthodontic parameters, esthetics, and patient satisfaction. Moreover, even the suturing materials and techniques are being discussed nowadays for success. However, osseointegration remains the predominant parameter in implant dentistry. It seems logical that the current definition of success criteria should be comprehensive to include these additional factors.

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Dr. Çağrı DELİLBAŞI
Faculty of Dentistry - İstanbul Medipol University

CV

Prof. Dr. Çağrı DELİLBAŞI, 1992 yılında TED Ankara Koleji'nden, 1997 yılında Gazi Üniversitesi Diş Hekimliği Fakültesi'nden mezun oldu. 1997-2001 yılları arasında Ankara Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş, Çene Hastalıkları ve Cerrahisi Anabilim Dalı'nda Doktora yaptı. 2001-2003 yılları arasında Japonya Kültür ve Eğitim Bakanlığı bursu ile Osaka Üniversitesi Diş Hekimliği Fakültesi'nde araştırmacı olarak bulundu. 2003-2011 yılları arasında Yeditepe Üniversitesi Diş Hekimliği Fakültesinde Öğretim Üyesi olarak görev yaptı. Halen İstanbul Medipol Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda Öğretim Üyesi olarak görevini yürütmektedir. Yurt içi ve yurt dışı çok sayıda sunum ve yayını bulunmaktadır.

Dr. Çağrı DELİLBAŞI graduated from TED Ankara College in 1992 and from Gazi University Faculty of Dentistry in 1997. He completed his PhD at Ankara University Faculty of Dentistry Department of Oral and Maxillofacial Surgery between 1997-2001. He was granted for Japanese Governmental scholarship between 2001-2003 at Osaka University. He worked at Yeditepe University as a lecturer and associate professor between 2003-2011. Since 2011 he has been at İstanbul Medipol University school of Dentistry, Department of Oral and Maxillofacial Surgery as a professor and head of the department. Dr. Delilbaşı has many publications and presentations.

ABSTRACT

Otalgia and Tinnitus : Dental and Medical Approach

Kulakta Ağrı ve Çınlama: Dental ve Medikal Yaklaşım

Kulak şikayetleri sebebiyle diş hekimlerine başvuran hastaların büyük bir çoğunluğu önceden Kulak-Burun-Boğaz uzmanlarına başvurmuş ve kulağında herhangi bir tıbbi problem bulunmayan hastalardan oluşmaktadır. Kulak ve çene-yüz bölgesinin yakın komşuluğu, semptomların karışmasına ve dental/fasiyal kaynaklı sorunların kulak bölgesine yayılmasına neden olmaktadır. Kulak bulguları olan hastaların pek çoğunda, Temporomandibular eklem (TME) düzensizliği, dental enfeksiyon gibi sebepler etken olarak gösterilmiştir. TME bölgesinde, ağrı, ses, çiğneme ve konuşma sırasında güçlük, baş-boyun ağrılarının görülmesi, hastada TME iç düzensizliğinin göstergeleri olarak bilinmektedir. Kulak ve TME bölgelerinde anatomik varyasyonların bulunması, bazı patoloji ve defektlerin gelişmesi kulak şikayetlerine neden olabilmektedir. Bunun yanı sıra, bazı sistemik hastalıklar ve kan tablosundaki değişiklikler, kulakta benzer şikayetlere yol açmaktadırlar. Kulak ve orofasiyal bölgede bir sorun tespit edilemeyen hastaların sistemik açıdan değerlendirilmeleri kulak semptomlarının anlaşılmasında önem kazanmaktadır.

Bu sunumda kulak ve çene bölgesinin anatomik ilişkisinin gösterilmesi, kulak bulgularının oluşmasına yönelik faktörlerin ele alınması ve TME düzensizliği olan ve kulak bulguları mevcut hastalarda tedavi yaklaşımlarının tartışılması amaçlanmaktadır.

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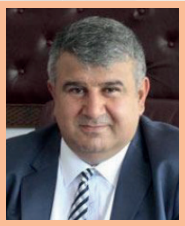

Dr. Ümit ERTAŞ
Faculty of Dentistry - Atatürk University

CV

Prof. Dr. Ümit Ertas, 1994 yılında Atatürk Üniversitesi Dis hekimligi Fakültesinden mezun oldu. 1999 yılında ise doktorasını Atatürk Üniversitesi Dis Hekimligi Fakültesi Ağız, Dis ve Çene Cerrahisi Anabilim dalında tamamlayarak "Dr." unvanını almıştır. Aynı üniversitede 2012 yılında Profesör unvanını almaya hak kazanmıştır. Çok sayıda ulusal ve uluslararası bilimsel makalesi ve uluslararası bilimsel makalelerde atıfları bulunmaktadır.Maksillofasial cerrahi,Ortognatik cerrahi,Travmatoloji,Dudak damak yarıgı ve Temporamandibuler eklem cerrahisi gibi konularda çok sayıda ulusal ve uluslararası konferanslar, seminerler ve kurslar vermektedir. Halen Atatürk Üniversitesi Dis Hekimligi Fakültesi Ağız, Dis ve Çene Cerrahisi Anabilim dalı baskanlıgı yapmaktadır. Ayrıca Erzurum Atatürk Üniversitesi Saglık Araştırma ve Uygulama Merkezinde 2019 yılında Maksillofasial Cerrahi Servisi kurmus ve halen Maksillofasial Cerrahi merkez sorumlusu olarak devam etmektedir.

Prof. Dr. Umit Ertas graduated from Ataturk University Faculty of Dentistry in 1994.In 1999, he completed his doctorate in the Department of Oral and Maxillofacial Surgery at Ataturk University Faculty of Dentistry and received the title of "Dr." He was entitled to receive the title of Professor in 2012 at the same university. He has numerous national and international scientific articles and has been cited in international scientific articles. He gives numerous national and international conferences, seminars and courses on topics such as maxillofacial surgery, orthognathic surgery, traumatology, cleft lip and palate and temporomandibular joint surgery.

ABSTRACT

Kraniomaksillofasiyal anomaliler, kafatası, maksilla ve yüz bögesindeki yapılarla ilgili dogustan gelen veya gelisimsel bozuklukları ifade eder. Bu anomaliler, genellikle yüz simetrisini, estetigi ve fonksiyonları etkiler ve bireylerin konusma, yutma ve solunum fonksiyonlarını etkileyebilir. Belirtiler, kafatasının seklinin alısılmadık şekilde degismesi, bas agrıları ve nörolojik sorunlar olabilir. Örnekler arasında kraniyosinostozis ve orta yüz gelisim eksikligi bulunur.Kraniyosinostozis kafatasının seklinin anormal sekilde olusmasına ve beyin gelisiminin sınırlanmasına neden olabilir. Bu anomalilerin nedenleri genetik, çevresel veya her ikisinin bir kombinasyonu olabilir. Teshis genellikle fiziksel muayene ve görüntüleme yöntemleri ile yapılır, tedavi ise cerrahi müdahaleler, ortodontik tedavi ve diger rehabilitasyon yöntemlerini içerebilir. Multidisipliner bir yaklasım, tedavi sürecinde optimal sonuçların elde edilmesine yardımcı olur.

Craniomaxillofacial anomalies are congenital or developmental abnormalities related to the structures of the skull, maxilla, and facial region. These anomalies usually affect facial symmetry, aesthetics, and function, and can affect an individual's speech, swallowing, and respiratory functions. Symptoms include unusual skull shape changes, headaches, and neurological problems. Examples include craniosynostosis and midface underdevelopment. Craniosynostosis can cause abnormal skull shape and limit brain development. The causes of these anomalies can be genetic, environmental, or a combination of both. Diagnosis is usually made through physical examination and imaging, while treatment can include surgical interventions, orthodontic treatment, and other rehabilitation methods. A multidisciplinary approach helps to achieve optimal results in the treatment process.

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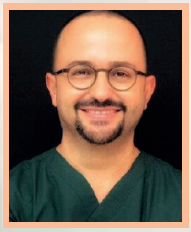

Dr. Onur GÖNÜL

Faculty of Dentistry - Marmara University

CV

Dr. Yavuz Tolga Korkmaz, Diş Hekimliği yüksek lisans eğitimini 2003 yıllında Gazi Üniversitesi Diş Hekimliği Fakültesi'nde, 2002 yılında Marmara Üniversitesi Diş Hekimliği Fakültesi'nden mezun oldu. 2009 yılında Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda doktora derecesini aldı.

Aynı üniversitede öğretim üyesi olarak görevine devam eden Profesör Doktor Onur Gönül'ün, uluslararası indekslerde taranan dergilerde 30'dan fazla makalesi ve uluslararası kitaplarda yayınlanmış 13 adet kitap bölümü bulunmaktadır. Çeşitli uluslararası ve ulusal kongre, sempozyum ve toplantılarda sunulmuş ve yayınlanmış 100'den fazla sunumu bulunmaktadır. Dental implantoloji, sert ve yumuşak doku rekonstrüksiyonları ve oral patolojiler mesleki ilgi alanıdır.

He graduated from Marmara University Faculty of Dentistry in 2002. In 2009, he received his phd degree in the Department of Oral and Maxillofacial Surgery.

Professor Doctor Onur Gönül, who continues to serve as a faculty member, at the same university, published over 30 articles in journals of which scanned in international indexes and he has 13 chapters published in international books. He has over 100 presentations written and published in various international and national congresses, symposiums and meetings. Dental implantology, hard and soft tissue reconstructions and oral pathologies are in his professional interest.

ABSTRACT

Dental implant uygulamalari öncesinde yeterli alveoler kemik hacminin bulunması, uzum donem basarıyı direkt olarak etkikeyen faktörlerdendir. Ancak bir cok olguda çesitli sebep lere bağlı olatak oluşmuş olan uetersizlikler karşımıza çıkmaktadır. Subperiostal implnatlar, zigomatik implantlar gibi görece invaziv tekniklere kiyasla alveoler seviye kemik artirim islemleri gunumuzde sıklıkla ve guvenle uygulanmaktadir. Sunumumuzda, vakalar eşliginde bu teknikler, olası komplikasyonlar ve birbirlerine kiyasla avantaj dezavantajlardan bahsedilecektir.

The presence of sufficient alveolar bone volume before dental implant applications is one of the factors that directly affects long-term success. However, in many cases, inadequacies that occur due to various reasons occur. Alveolar level bone augmentation procedures are frequently and safely applied today compared to relatively invasive techniques such as subperiosteal implants and zygomatic implants. In our presentation, these techniques, possible complications and advantages and disadvantages compared to each other will be discussed with the help of cases.

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Dr. Yavuz Tolga KORKMAZ
Faculty of Dentistry - Karadeniz Technical University

CV

Dr. Yavuz Tolga Korkmaz, Diş Hekimliği yüksek lisans eğitimini 2003 yıllında Gazi Üniversitesi Diş Hekimliği Fakültesi'nde, doktora eğitimini ise 2010 yılında Gazi Üniversitesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalında tamamladı. 2011 yılında Karadeniz Teknik Üniversitesi Diş Hekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Anabilim Dalında öğretim üyesi olarak Yardımcı Doçent kadrosuna atanan Dr. Korkmaz 2018 yılında Doçent, 2023 yılında Profesör ünvanını kazanmıştır. Halen aynı üniversitede Ağız, Diş Çene Cerrahisi Anabilim Dalında Anabilim Dalı Başkanı olarak görev yapmaktadır. Dr. Korkmaz'ın uluslararası ve ulusal hakemli dergilerde birçok bilimsel makalesi ve kitap bölüm yazarlıkları bulunmaktadır. Dr. Korkmaz, Türk Oral ve Maksillofasiyal Cerrahi Derneği (TAOMS) yönetim kurulu üyesi olarak çalışmalarına devam etmektedir.
Ortognatik cerrahi, temporomandibular eklem hastalıkları-klinik ve cerrahi tedavileri, ileri implant cerrahileri, dentoalveolar cerrahi ve maksillofasiyal travma mesleki ilgi alanları arasında yer almaktadır.

Dr. Yavuz Tolga Korkmaz graduated from Gazi University Faculty of Dentistry in 2003 and PhD in 2010 at Gazi University Faculty of Dentistry, Department of Oral and Maxillofacial Surgery. In 2011 he had started to Karadeniz Technical University Faculty of Dentistry, Department of Oral and Maxillofacial Surgery and appointed to teaching staff as an Assistant Professor. Dr. Korkmaz had gained the title of Associate Professor in 2018. He appointed as a Professor in 2023. He is currently Chairman of the Department of Oral Maxillofacial Surgery at the same university.
Dr. Korkmaz has many national and international research articles and book chapters in scientific book and journals. Dr. Korkmaz is the member of Turkish Association of Oral and Maxillofacial Surgeons (TAOMS). Dr Korkmaz's areas of clinical and research interest are orthognatic surgery, temporomandibular jont disorders' clinical and surgical treatments, advanced dental implant surgery, dentoalveolar surgery and maxillofacial trauma.

ABSTRACT

Maksiller sinus augmentasyonu ve tartışmalı konular
Posterior maksiller bölgede dental implant uygulanmasına engel olan kemik yetersizliği durumlarında maksiller sinus augmentasyonu kullanılabilir. Posterior maksillada yeni kemik oluşumunu sağlamak için kemik grefti ile veya kemik grefti olmadan yapılan çok çeşitli augmentasyon yöntemleri ve greft materyalleri ile ilgili birçok klinik veya deneysel çalışma yapılmıştır. Maksiller sinüs augmentasyon teknikleri zorluklar, avantajlar ve dezavantajlar gibi tüm yönleri ile tartışılacaktır. Bununla birlikte augmentasyon tekniklerinin uzun dönem başarı oranları ve başarı sırları ile ilgili bilgiler verilecektir. Ayrıca bu sunumda konuşmacı, kendi klinik tecrübelerini güncel literatür bilgisi eşliğinde sunacaktır.

Maxillary sinus augmentation and controversial issues
The lack of bone in the posterior maxilla that prevents the placement of dental implants can be overcome by maxillary sinus augmentation. Many clinical and experimental studies have evaluated various augmentation techniques with or without bone grafting and graft materials for new bone generation in the posterior maxilla. All aspects of maxillary sinus augmentation techniques such as diffuculties, advantages and disadvantages will be discussed. Hovewer, information will be given regarding the long-term success rates of the augmentation techniques and the surgical secrets. Moreover in this presentation, the lecturer will share his own clinical experiences with current literature review.

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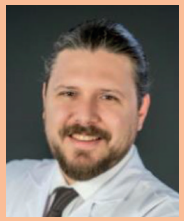

Dr. Alper SİNDEL
Faculty of Dentistry - Akdeniz University

CV

2007 yılında Hacettepe Üniversitesi Diş Hekimliği Fakültesi'nden mezun olmasını takiben, Ankara Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş ve Çene Cerrahisi Ana Bilim Dalı'nda uzmanlık ve doktora eğitim programını tamamlamıştır. 2012 yılında Akdeniz Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş ve Çene Cerrahisi Ana Bilim Dalı'nda uzman doktor olarak görev yapmaya başlamış, 2015-2016 yılları arasında İngiltere'de Poole Hastanesi NHS Kuruluş Vakfı'nda fasiyal plastik cerrahi ve maksillofasiyal cerrahi ile mikrovasküler cerrahi eğitimlerini almıştır. Dr. Sindel 2018 yılında Ağız, Diş ve Çene Cerrahisi Doçenti ünvanını, 2024 yılında ise aynı dalda profesör ünvanını almış olup halen Akdeniz Üniversitesi Diş Hekimliği Fakültesi, Ağız, Diş ve Çene Cerrahisi Anabilim Dalı bünyesinde öğretim üyesi olarak görev yapmaktadır. Klinik tecrübe ve araştırma alanları arasında dental implantoloji, TME, maksillofasiyal travma, oral hastalıklar, cerrahi anatomi, oral patoloji, ortognatik cerrahi, oral farmakoloji, maksillofasiyal anomaliler ve kraniyomandibular düzensizlikler yer almakta olup, farklı hakemli bilimsel dergilerde ilgili konularda yayımlanmış çok sayıda bilimsel makalesi ve kitap bölümleri mevcuttur. IAOMS (Uluslararası Oral ve Maksillofasiyal Cerrahlar Birliği), TAOMS (Türk Oral ve Maksillofasiyal Cerrahi Derneği) ve ACBID (Ağız Ve Çene-Yüz Cerrahisi Birliği Derneği) üyelikleri bulunmaktadır.

Upon initially graduating in dentistry from Hacettepe University in 2007, Dr Sindel awarded doctorate degree (PhD) in oral and maxillofacial surgery from Faculty of Dentistry, Ankara University. In 2012, he started working as a specialist at the Department of Oral and Maxillofacial Surgery at Akdeniz University. He received a fellowship in facial plastic surgery and maxillofacial surgery and completed a practical microvascular course at Poole Hospital NHS Foundation Trust, Poole, UK in 2015-2016. Dr. Sindel qualified as an associate professor in 2018 and received the title of professor in the same field in 2024. He is currently a faculty member at the Department of Oral and Maxillofacial Surgery at Akdeniz University. Dr. Sindel's areas of clinical and research interest are dental implantology, TMJ, oral diseases, surgical anatomy, oral pathology, orthognatic surgery, oral medicine, maxillofacial abnormalities, craniomandibular disorders and maxillofacial trauma. He has several publications and chapters in the peer reviewed literature. He is a member of IAOMS (International Association of Oral and Maxillofacial Surgeons), TAOMS (Turkish Association of Oral and Maxillofacial Surgery, Turkey) and ACBID (The Oral and Maxillofacial Surgery Society Association, Turkey).

ABSTRACT

Ortognatik Cerrahide Karşılaşılabilecek Komplikasyonlar ve Önleme Stratejileri

Ortognatik cerrahi tedaviler, operasyon öncesi, intraoperatif ve postoperatif dönemlerde ortaya çıkabilecek çeşitli komplikasyonlarla ilişkilidir. Bu sunum, ortognatik cerrahi süreçlerindeki oluşabilecek komplikasyonların gerçekleşmesini azaltabilmek adına uygulanabilecek stratejilerle ilgili bilgi vermeyi amaçlamaktadır.

Complications in Orthognathic Surgery and Preventive Strategies

Orthognathic surgical treatments are associated with various complications that may arise preoperatively, intraoperatively, or postoperatively. This presentation aims to provide information about strategies that can be implemented to reduce the complications during the orthognathic surgery processes.

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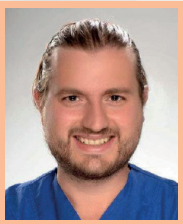

Dr. Onur ŞAHİN
Faculty of Dentistry - İzmir Katip Çelebi University

CV

2011 yılında Hacettepe Üniversitesi Diş Hekimliği Fakültesi'nden mezun olan Dr. Onur Şahin, 2016 yılında Gazi Üniversitesi Diş Hekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Anabilim Dalı'nda uzmanlık eğitimini tamamlamıştır. 2017 yılından bu yana İzmir Katip Çelebi Üniversitesi Diş Hekimliği Fakültesi'nde öğretim üyesi olarak görev yapmaktadır. 2021 yılında doçent ünvanı almıştır. Dr. Şahin'in ilgi alanları arasında ileri implantoloji, atrofik çenelerin sert ve yumuşak doku büyütmeleri, all-on-X tedavisi, zigomatik, pterygoid ve transnazal implantlar, ilaca bağlı çene kemiği osteonekrozları (MRONJ), kök hücre ve rejeneratif tedaviler bulunmaktadır. İmplantoloji ve çene cerrahisi ile ilgili birçok ulusal ve uluslarası sempozyumda davetli konuşmacı olarak yer almış ve implantoloji üzerine birçok hands-on ve kadavra kursu vermiştir. Türkiye'de zigoma, pterygoid ve transnazal implantlar ile ilk vakayı gerçekleştiren Dr. Şahin'in bu implantlar ile tedavi ettiği 100'ün üzerinde hastası bulunmaktadır. Bilimsel alanı ile ilgili ulusal ve uluslarası dergilerde yayınlanmış 50'nin üzerinde makalesi, ulusal ve uluslarası kongrelerde sunulmuş 100'ün üzerinde poster/sözlü bildirisi bulunmaktadır.

Dr. Onur Şahin graduated from Dentistry Faculty of Hacettepe University in 2011 and he completed his specialization training in the Oral and Maxillofacial Surgery Department of Gazi University in 2016. He has been worked as an academician in Oral and Maxillofacial Surgery Department of İzmir Katip Çelebi University since 2017. He was entitled as associate professor in 2021. Dr. Şahin's interests include that advanced implantology, hard and soft tissue augmentation of atrophic jaws, all-on-X treatment, zygomatic, pterygoid and transnasal implants, medication related osteonecrosis of the jaw (MRONJ), stem cell and regenerative therapies. He has been as a speaker at many symposiums on implantology and oral and maxillofacial surgery and has given many hands-on and cadaver courses on implantology . Dr. Şahin performed the first case with zygomatic, pterygoid and transnasal implants in Türkiye and he has more than treated 100 patients with these implants. He has more than 50 articles published in national and international journals, and more than 100 poster/oral presentation presented in national and international congresses related with his scientific field.

ABSTRACT

Pterygoid ve transnazal implantlar kullanılarak aşırı atrofik maksillanın rehabilitasyonu
Dental implantoloji alanında son yıllardaki gelişmeler birçok yeni tedavi yöntemini de beraberinde getirmiştir. İnsan yaşamının uzamasıyla birlikte çene kemiklerinde ileri derecede rezorpsiyonu olan hastaların sabit protezler ile rehabilitasyonu ise klinisyenler için bir zorluk haline gelmiştir. Klinisyenler, implant destekli protez planlarken, kemik hacmi eksikliğini kemik greftleme ve sinüs yükseltme prosedürleriyle telafi etmektedirler. Ancak bu da komplikasyon riski ve maliyeti yüksek uzun tedavi süreçlerini de beraberinde getirmektedir. Pterygoid ve transnazal implantlar, son yıllarda kullanımda olmalarına rağmen, dental implant tedavileri arasında en az uygulanan yaklaşımlarından biridir. Bunun nedeni, pterygoid ve transnazal implantların, tüm implant diş hekimliği alanında yerleştirilmesi ve komplikasyon riski açısından en zor yöntemlerden biri olarak kabul edilmesi gelmektedir. Bu sunumda, pterygoid ve transnazal implantların aşırı atrofik maksillanın rehabilitasyonunda kullanımı irdelenecektir.

Pterygoid ve transnazal implantlar kullanılarak aşırı atrofik maksillanın rehabilitasyonu
In recent years, implant technology has significantly advanced, making implant treatments more accurate, faster, and predictable. With the extension of human life, the rehabilitation of patients with advanced resorption in the jaw bones with fixed prostheses has become a challenge for clinicians. When planning implant-supported prostheses, clinicians compensate for the lack of bone volume with bone grafting and sinus lift procedures. However, this also causes with it long treatment processes with high complication risks and costs. Pterygoid and transnasal implants, despite being in use in recent years, are one of the least performed approaches among dental implant treatments.The reason for this is that pterygoid and transnasal implants are considered to be one of the most difficult methods in terms of placement and complication risk in the entire field of implant dentistry. In this presentation, the use of pterygoid and transnasal implants in the rehabilitation of severely atrophic maxilla will be discussed.

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Dr. Umut TEKİN
Faculty of Dentistry - Health and Sciences University

CV

1997 yılında Gazi Üniversitesi Dis Hekimligi Fakültesi'nden birincilikle mezun olmus, daha sonra Ankara Üniversitesi Agız, Dis ve Cene Cerrahisi Anabilim Dalı'nda doktora yapmıs, 2002 yılında bilim doktoru unvanı almıstır. 2003 yılında Kırıkkale Üniversitesi Dis Hekimligi Fakültesi'nde Yardımcı Doçent ve 2008-2009 yılları arasında aynı fakültede kurucu Dekan Yardımcılıgı görevinde bulunmustur. 2007 yılında Docent unvanı almıstır. 2023 yılına kadar aynı anabilim dalında ögretim üyesi olarak çalısmıstır. Dr. Tekin 2011-2012'de TÜBİTAK yurt dısı doktora sonrası arastırma burs programı kapsamında ABD Rochester MN' da bulunan MAYO CLINIC' de pek çok araştırma projesi yürütmüstür. Halen Saglık Bilimleri Üniversitesi, Gülhane Dis Hekimligi Fakültesi, Agız, Dis ve Cene Cerrahisi Anabilim Dalı'nda Profesör olarak çalısmaktadır. Dr. Tekin'in alanında önemli dergilerde yayımlanmıs pek çok bilimsel makalesi, hakemlik ve mesleki kuruluşlara üyeligi bulunmaktadır. TME, Ortognatik cerrahi, travma ve ileri implant cerrahisi ilgi alanlarıdır. Alanında pek çok kurs, kongre ve çalıstay düzenlemistir.

Dr. Umut Tekin Umut Tekin graduated from the University of Gazi, School of Dentistry with honors, her Ph.D.in Oral and Maxillofacial Surgery from University of Ankara, Turkey. Dr. Tekin was formerly Assistant Professor and Associate Professor of Oral and MaxillofacialSurgery at University of Kırıkkale from 2003-2013. She has also served as the Vice Dean in School of Dentistry Kırıkkale University between 2008 and 2009. She worked as a Visiting Clinician at Mayo Clinic Rochester, MN in 2011, this visit was awarded by The Scientific and Technological Research Council of Turkey. She maintained a clinical focus on the temporomandibular joint during her study in Mayo Clinic. She is currently professor in Oral and Maxillofacial Surgery Department at Health and Sciences University. She is member of several professional societies. She has numerous publications; her research interests are TMJ, orthognathic surgery, advanced implant surgery and trauma. Dr. Tekin has numerous scientific articles published in important journals in his field, as well as memberships in professional organizations and peer review roles. He has organized many courses, congresses, and workshops in his area of expertise.

ABSTRACT

Kondiler Hiperplazi: Güncel Düsünceler

Unilateral kondiler hiperplazi, mandibuler kondilin aşırı büyüme ve genişlemesi sonucu fasiyal asimetriye neden olan nadir bir durumdur. Tek foton emisyon tomografisi hastalığın aktif olup olmadığı konusunu saptamak için kullanılmalıdır. Orantısal ya da yüksek seviyede kondilektomi aktif hastalığı bloke eder böylece mandibuler yükseklik farkı eşitlenir. Rezidual asimetri de ortognatik cerrrahi ile düzeltilebilir. Kondiler hiperplazi hastalarında en iyi tedavi yönteminin ne olduğu konusunda hala bir konsensus yoktur. Üç boyutlu sanal planlama, rehberli cerrahiler kompleks hareketleri yönetebilmek için iyi seçeneklerdir.

Condylar Hyperplasia:Current Thoughts

Unilateral condylar hyperplasia is a rare disease that causes facial asymmetry as a result of cause excessive growth and enlargement of the mandibular condyle. Single-photon emission computed tomography (SPECT) should be used to determine whether the disease is active. Proportional or high condylectomy arrests active disease and restores mandibular height, and any residual asymmetry can be corrected according to conventional orthognathic surgical principles. There is still no consensus regarding the best treatment for patients with condylar hyperplasia. The use of 3D virtual planning and guided surgery is a good choice for such complex movements.

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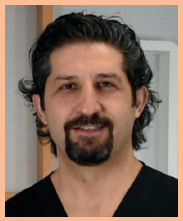

Dr. Faysal UĞURLU
Faculty of Dentistry - Marmara University

CV

Prof. Dr. Faysal UĞURLU 1978 yılında Erzincan'da doğdu. 1995 yılında Erzincan Anadolu Lisesi'nden, 2001 yılında Marmara Üniversitesi Diş Hekimliği Fakültesi'nden mezun oldu. Marmara Üniversitesi Diş Hekimliği Fakültesi'nde Çene cerrahisi alanındaki uzmanlığını 2001-2009 yılları arasında tamamlayarak 2009 yılında doktor unvanını aldı. 2008 yılında Budapeşte/Macaristan Semmelweis Üniversitesi Maksillofasiyal Cerrahi Bölümünde davetli doktor olarak 6 ay bulundu. 2009-2010 döneminde Gölcük Donanma Başkanlığı'nda OMFS cerrahı olarak görev yaptı ve ardından Marmara Üniversitesi Diş Hekimliği Fakültesine döndü ve öğretim üyesi olarak akademik görevine başladı. 2014 yılında doçentlik 2021 yılında profesörlük unvanını aldı. Halen Marmara Üniversitesi Diş hekimliği Fakültesi'nde Profesör olarak akademik kariyerine devam eden Faysal Uğurlu, aynı fakültede öğretim üyesi olarak ders vermektedir. Birçok ulusal ve uluslararası kongrelerde davetli konuşmacı olarak katılmış, alanında uluslararası ve ulusal bilimsel dergilerde, kitaplarda makaleler yayınlamıştır.

Prof. Dr. Faysal Uğurlu was born in 1978 in Erzincan. He graduated from Erzincan Anatolian High School in 1995 and Marmara University Faculty of Dentistry in 2001. He completed his specialty of OMFS surgery between 2001-2009 in Marmara University Faculty of Dentistry and obtained his PhD degree in 2009 in the same University. In 2007, he was invited as a visiting doctor in the Oral and Maxillofacial Surgery Department of the University of Semmelweis, Budapest/Hungary, where he went on a scholarship for 6 months. In the period 2009-2010 he worked as an OMFS surgeon at Gölcük Military Hospital then returned to and became a teaching member in Marmara University Faculty of Dentistry. Dr. Faysal still continues his academic career as a professor in Marmara University Faculty of Dentistry and teaches at the same faculty as a lecturer. He has given invited lectures as guest speaker at national and international congresses. He has many articles in international and national scientific journals and chapters in books.

ABSTRACT

Segmental Mandibula Rezeksiyonlarında Rekonstrüksiyon plaklarının Etkinliği

Mandibulada görülen, doku kaybına sebep olan ve kemik devamlılığını bozan majör patolojik durumlarda ve/veya kırık olgularında rehabilitasyon için rekonstrüksiyon plakları sıklıkla kullanılmaktadır. Rekonstrüksiyon plakları gerek sağlam yapısı gerekse yük taşıyabilme kapasitesi nedeni ile birçok cerrahi branşta tercih edilmektedir. Özellikle maksillofasiyal bölgede mandibulada sıklıkla tümör cerrahisinde, marjinal segmental rezeksiyonlarda ve aşırı rezorbe çenelerin kırıklarında kullanılmaktadır. Bu plakların bükülme zorluğu ve adaptasyon güçlüğünden dolayı tecrübe ve zaman gerekliliği ihtiyacı doğar. Rekonstrüksiyon plaklarının bükümleri cerrahın tercihine ve vakanın özelliğine göre preoperatif veya intraoperatif olarak gerçekleştirilmektedir. Maksillofasiyal bölgede teşhis, tanı ve tedavide artık rutin haline gelen 3 boyutlu tomografilerde vakayı planlamak mümkündür. Bu datalar cerrahi öncesinde 3 boyutlu yazıcılarla elde edilen 3 boyutlu modeller için sıklıkla kullanılmaktadır. 3 boyutlu modellerin hazırlanması ile preoperatif plak bükümleri model üzerinde yapılarak çok büyük kolaylık sağlanmaktadır. Operasyon süresi kısalırken aynı zamanda operasyon sahasının daha büyük açılmasının önüne geçilir. Bunun yanında günümüzde biyomühendisliğin hızlı gelişimi ile beraber kişiye özel hazırlanan ve dökülen plaklar daha iyi adaptasyon, daha iyi direnç gösterecek şekilde hazırlanabilmektedir. Bu durum plaklarda deformasyonları ve plak yorgunluğunu önlemektedir. Sunumda rekonstrüksiyon plak gerekliliği olan hastalarda preoperatif hazırlık, intraoperatif zorluklar, olası komplikasyonları ve çözümleri, rekonstrüksiyon plak tercihleri avantaj dezavantajlarına anlatılacaktır.

Effectiveness of the Reconstruction Plates after Segmental Resection of the Mandible

Reconstruction plates are often used for rehabilitation in major pathological conditions and/or fracture cases that occur in the mandible, cause tissue loss and disrupt bone continuity. Reconstruction plates are preferred in many surgical branches due to their robust structure and load-bearing capacity. It is often used in tumor surgery, marginal segmental resections and fractures of excessively resorbed jaws, especially in the mandible in the maxillofacial region. Due to the difficulty of bending and adaptation difficulties of these plates, the need for experience and time necessity arises. The twists of the reconstruction plates are performed preoperatively or intraoperatively according to the surgeon's preference and the nature of the case. It is possible to plan the case on 3-dimensional tomographs, which have now become routine in diagnosis and treatment in the maxillofacial region. These data are often used for 3D models obtained with 3D printers before surgery. With the preparation of 3-dimensional models, great convenience is provided by making preoperative plate bends on the model. While the operation time is shortened, a larger opening of the operation area is prevented at the same time. In addition, with the rapid development of bioengineering today, specially prepared and poured plaques can be prepared in such a way as to show better adaptation and better resistance. This prevents deformations and plaque fatigue in the plaques. Preoperative preparation, intraoperative considerations, possible complications and their solutions, advantages and disadvantages of reconstruction plate preferences are going to be presented.

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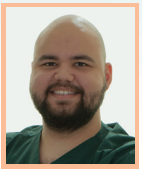

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Dr. Ferit BAYRAM
Faculty of Dentistry - Marmara University

CV

Dr. Ferit Bayram, Marmara Üniversitesi Diş Hekimliği Fakültesi Ağız ve Çene Cerrahisi Anabilim Dalı'nda doktor öğretim üyesi olarak görev yapmaktadır. 2007 yılında Marmara Üniversitesi Diş Hekimliği Fakültesi'nden mezun olmuş, ardından Marmara Üniversitesi'nde ağız ve çene cerrahisi alanında uzmanlık eğitimini tamamlamıştır. Dr. Bayram'ın temel araştırma alanları, ileri implantoloji teknikleri, ortognatik cerrahi ve çene patolojileridir. Kendisi, 20'den fazla hakemli dergide makale yayınlamış olup, ADEP, TÜBİTAK ve TÜSEB destekli projelerde yürütücü olarak yer almıştır. Dr. Bayram, halen çenede ilaca bağlı osteonekroz ve ileri implant cerrahisi üzerine multidisipliner araştırmalar yürütmektedir.

Dr. Ferit Bayram is an Assistant Professor at the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Marmara University. He graduated from the Faculty of Dentistry at Marmara University in 2007 and completed his PhD degree in oral and maxillofacial surgery at the same institution. Dr. Bayram's main research areas include advanced implantology techniques, orthognathic surgery, and jaw pathologies. He has published over 20 peer-reviewed articles and has served as the principal investigator in projects supported by ADEP, TÜBİTAK, and TÜSEB. Dr. Bayram is currently conducting multidisciplinary research on medication-related osteonecrosis of the jaw and advanced implant surgery.

ABSTRACT

Posterior Mandibulada Dental İmplant Uygulamalarında Inferior Alveolar Sinir Lateralizasyonu: Cerrahi Teknik ve Klinik Uygulamalar

Bu sunum, yetersiz kemik hacmi bulunan posterior mandibulada dental implant yerleştirilmesi için alternatif bir cerrahi yöntem olarak inferior alveolar sinir (IAS) lateralizasyonuna odaklanmaktadır. Geleneksel vertikal augmentasyon yönteminin aksine, IAS lateralizasyonu, mevcut kemiği kullanarak sinirin dikkatlice yeniden konumlandırılabilmesine imkan sağlar ve ilave kemik greftine ihtiyaç duyulmadan implant yerleştirilmesine olanak tanır. Sunumda, sinir konumu ve kemik hacmini değerlendirmek için üç boyutlu görüntüleme ile yapılan detaylı preoperatif planlamanın önemi vurgulanacaktır. Piezocerrahi gibi intraoperatif teknikler, adım adım prosedürün klinik görsellerle anlatılmasıyla öne çıkarılacaktır. Bu yaklaşımın etkinliğini desteklemek ve klinik sonuçlarını göstermek için ilgili literatür sunuma entegre edilecektir. Parestezi gibi olası komplikasyonlar ele alınacak olup, bunların genellikle geçici olduğu ve kalıcı fonksiyon kaybına neden olmadığı vurgulanacaktır.

Inferior Alveolar Nerve Lateralization for Dental Implant Placement in the Posterior Mandible: Surgical Technique and Clinical Applications

This presentation focuses on the surgical technique of inferior alveolar nerve (IAN) lateralization as an alternative approach for dental implant placement in the posterior mandibular region with insufficient bone volume. Unlike traditional vertical augmentation, IAN lateralization utilizes the existing bone by carefully repositioning the nerve, enabling implant placement without the need for additional bone grafting. Emphasis will be placed on detailed preoperative planning with three-dimensional imaging to assess nerve trajectory and bone volume. Intraoperative techniques, including the use of piezosurgery, will be illustrated with clinical images to demonstrate the step-by-step procedure. Relevant literature will be integrated to support the efficacy of this approach and highlight its clinical outcomes. Potential complications, such as paresthesia, will be addressed, noting that these are typically transient and do not significantly impair function.

Dr. Sezai ÇİFTÇİ
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Doktor Öğretim Üyesi Sezai Çiftçi; 2014 yılında Çukurova Üniversitesi, Diş Hekimliği Fakültesinden mezun oldu. 2015 yılında Gaziantep Ağız ve Diş Sağlığı Merkezinde görev yaptı. 2016 yılında yapılan Diş Hekimliği Uzmanlık Eğitimi Giriş Sınavı ile Karadeniz Teknik Üniversitesi Diş Hekimliği Fakültesi, Ağız, Diş ve Çene Cerrahisi bölümünü kazanmış olup 2021 yılında uzmanlık eğitimini tamamladı. Belli bir süre kadar Bursa'da özel bir poliklinikte Ağız Diş ve Çene Cerrahi uzmanı olarak görev yaptı. 2022 yılında İnönü Üniversitesi, Diş Hekimliği Fakültesi, Ağız, Diş ve Çene Cerrahisi Anabilim Dalı bölümünde Doktor Öğretim Üyesi görevine başladı ve hala devam etmektedir. Ulusal ve uluslararası kongreler ve seminerlere katılmıştır. Bu kongrelerin bir kısmında sunumlar yapmıştır. Başlıca ilgili olduğu alanlar; dental implant cerrahisi, alveol yarık onarımı, ortognatik cerrahi konuları olmuştur.

Assistant Professor Sezai Çiftçi graduated from Çukurova University, Faculty of Dentistry, in 2014. He worked at Gaziantep Oral and Dental Health Center in 2015. In 2016, he passed the Dentistry Specialty Entrance Exam and was accepted into the Oral and Maxillofacial Surgery program at Karadeniz Technical University, completing his specialization in 2021. He worked as an Oral and Maxillofacial Surgery specialist at a private clinic in Bursa for a while. In 2022, he began working as an Assistant Professor in the Department of Oral and Maxillofacial Surgery at İnönü University, where he continues his academic career. He has participated in national and international conferences and seminars, presenting at some of these events. His main areas of interest include dental implant surgery, alveolar cleft repair, and orthognathic surgery.

ABSTRACT

Oronazal Fistül Tedavi Yöntemleri: İki Olgu Sunumu

Doktor Öğretim Üyesi Sezai Çiftçi; 2014 yılında Çukurova Üniversitesi, Diş Hekimliği Fakültesinden mezun oldu. 2015 yılında Gaziantep Ağız ve Diş Sağlığı Merkezinde görev yaptı. 2016 yılında yapılan Diş Hekimliği Uzmanlık Eğitimi Giriş Sınavı ile Karadeniz Teknik Üniversitesi Diş Hekimliği Fakültesi, Ağız, Diş ve Çene Cerrahisi bölümünü kazanmış olup 2021 yılında uzmanlık eğitimini tamamladı. Belli bir süre kadar Bursa'da özel bir poliklinikte Ağız Diş ve Çene Cerrahi uzmanı olarak görev yaptı. 2022 yılında İnönü Üniversitesi, Diş Hekimliği Fakültesi, Ağız, Diş ve Çene Cerrahisi Anabilim Dalı bölümünde Doktor Öğretim Üyesi görevine başladı ve hala devam etmektedir. Ulusal ve uluslararası kongreler ve seminerlere katılmıştır. Bu kongrelerin bir kısmında sunumlar yapmıştır. Başlıca ilgili olduğu alanlar; dental implant cerrahisi, alveol yarık onarımı, ortognatik cerrahi konuları olmuştur.

Oronasal Fistula Treatment Methods: Two Case Reports

Assistant Professor Sezai Çiftçi graduated from Çukurova University, Faculty of Dentistry, in 2014. He worked at Gaziantep Oral and Dental Health Center in 2015. In 2016, he passed the Dentistry Specialty Entrance Exam and was accepted into the Oral and Maxillofacial Surgery program at Karadeniz Technical University, completing his specialization in 2021. He worked as an Oral and Maxillofacial Surgery specialist at a private clinic in Bursa for a while. In 2022, he began working as an Assistant Professor in the Department of Oral and Maxillofacial Surgery at İnönü University, where he continues his academic career. He has participated in national and international conferences and seminars, presenting at some of these events. His main areas of interest include dental implant surgery, alveolar cleft repair, and orthognathic surgery.

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Dr. Fatih GİRGİN
Faculty of Dentistry - Karadeniz Technical University

CV

Fatih Girgin, Marmara Üniversitesi Diş Hekimliği Fakültesi'nden 2015 yılında mezun oldu. 3 yıl İstanbul'da özel bir poliklinikte çalıştıktan sonra 2019 yılında Karadeniz Teknik Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda uzmanlık eğitimine başladı. 2024 yılında "Atrofik Maksillada Zigomatik İmplant, Trans-sinüs İmplant ve Pterygoid İmplant Konseptlerinin Stres Dağılımlarının Karşılaştırılması: Bir Sonlu Eleman Analizi" adlı tezini savunarak Ağız, Diş ve Çene Cerrahisi Uzmanı ünvanını aldı. Halen aynı üniversitede görevine devam etmektedir.
Evli ve 1 çocuk babasıdır.

Fatih Girgin graduated from Marmara University Faculty of Dentistry in 2015. After working for 3 years in a private polyclinic in Istanbul, he started his speciality training at Karadeniz Technical University Faculty of Dentistry, Department of Oral, Dental and Maxillofacial Surgery in 2019. In 2024, he presented his thesis titled 'Comparison of Stress Distributions of Zygomatic Implant, Trans-sinus Implant and Pterygoid Implant Concepts in Atrophic Maxilla: A Finite Element Analysis' and received the title of Oral, Dental and Maxillofacial Surgery Specialist. He is still working at the same university.
He is married and has 1 child.

ABSTRACT

Sagittal Split Ramus Osteotomisi'nde Posnick Modifikasyonu: Neden, Nasıl, Ne Zaman?
Sagittal split ramus osteotomisi (SSRO), mandibular deformitelerin düzeltilmesinde en yaygın kullanılan tekniklerden biridir. Obwegeser ve Trauner tarafından tanımlandıktan sonra, bu teknik üzerinde birçok farklı modifikasyon geliştirilmiştir. Bu modifikasyonlardan en güncel olanlardan biri, Posnick'in SSRO'da medial osteotomi hattını lingulanın altında ve önünde konumlandırmayı önerdiği tekniktir. Günümüzde, ramusun transversal planda çok ince olduğu durumlarda bad-split riskini ortadan kaldırmak ve özellikle asimetrik vakalarda segmentler arasındaki kemik interferanslarını azaltmak amacıyla Hunsuck modifikasyonu yerine Posnick modifikasyonu tercih edilebilmektedir.
Bu sunumda, sagittal split ramus osteotomisinde Posnick modifikasyonunun, hangi durumlarda ve ne zaman kullanılabileceği yazarın kendi tecrübeleriyle aktarılacaktır.

Posnick Modification of Sagittal Split Ramus Osteotomy: Why, How, When?
Sagittal split ramus osteotomy (SSRO) is one of the most widely used techniques for the correction of mandibular deformities. After its description by Obwegeser and Trauner, many different modifications were developed. One of the most recent of these modifications is Posnick's technique in which the medial osteotomy line is positioned anterior and inferior to the lingula in SSRO. Today, Posnick's modification can be preferred instead of Hunsuck's modification in order to eliminate the risk of bad-split when the ramus is very thin in the transversal plane and to reduce bone interferences between the segments, especially in asymmetric cases. In this presentation, the author's own experience will be used to explain when and in which cases the Posnick modification can be used in sagittal split ramus osteotomy.

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2009 yılında öğrencisi olduğum Ankara Üniversitesi Diş Hekimliği Fakültesinden 2014 yılında mezun oldum. 2015 yılında Sağlık Bakanlığı kadrosunda diş hekimi olarak çalışmaya başladım. 2016'da Ondokuz Mayıs Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda uzmanlık eğitimine başladım. 2020 'de uzmanlık eğitimi tamamladım ve Sağlık Bakanlığı kadrosunda görevime devam ettim. 2021 yılında başladığım Ondokuz Mayıs Üniversitesi Diş Hekimliği Fakültesi'ndeki görevimi şuanda da sürdürmekteyim.

I graduated from the Faculty of Dentistry at Ankara University, where I was a student in 2009, in 2014. 2015, I started working as a dentist at the Ministry of Health. In 2016, I began my specialization training in the Department of Oral, Dental, and Maxillofacial Surgery at Ondokuz Mayıs University Faculty of Dentistry. I completed my specialization training in 2020 and continued my duties at the Ministry of Health. I have been continuing my role at the Faculty of Dentistry at Ondokuz Mayıs University, which I started in 2021.

ABSTRACT

İ-PRF 'nin Klinik Kullanımına Yeni Bir Yaklaşım

Otolog kan ürünleri, potansiyel terapötik uygulamaları nedeniyle tıp alanında giderek artan bir ilgi kazanmaktadır. Bireyin kendi kanından elde edilen bu ürünler doku rejenerasyonunu uyarabilen çeşitli büyüme faktörleri ve biyoaktif moleküller açısından zengindir. Otolog kan ürünlerinden biri olan trombositten zengin fibrin (PRF), yumuşak doku yara iyileşmesini ve rejenerasyonunu destekleme yeteneği açısından kapsamlı bir şekilde araştırılan ikinci nesil. Doğal olarak elde edilen bu fibrin iskelesi, kanın biyokimyasal olarak işlenmesine gerek kalmadan basitleştirilmiş bir santrifüjleme işlemiyle elde edilir. Çeşitli çalışmalar PRF'nin doku rejenerasyonunu hızlandırmada, anjiyogenezi arttırmada ve yara iyileşme sonuçlarını iyileştirmede etkinliğini göstermiştir. PRF elde edilirken farklı protokoller kullanmak mümkündür. Protokolde kullanılan parametreler elde edilen son ürünün fiziksel ve kimyasal özelliklerini ekilemektedir. Bu parametreler değiştirilerek üretilen ve PRF'nin enjekte edilebilir formülasyonu olarak da bilinen İ-PRF, doku mühendisliği ve rejeneratif tedavilere benzersiz bir yaklaşım sağlayan, biyomoleküller için gelişmiş bir rezervuar sistemi olarak tanıtılmıştır. Güncel literatür İ-PRF'nin rejeneratif tıp alanında yenilikçi ve çok yönlü bir ürün olarak büyük umutlar vaat ettiğini gösteriyor.

A New Approach to the Clinical Use of I-PRF

Autologous blood products are gaining increasing interest in medicine due to their potential therapeutic applications. These products, derived from an individual's own blood, are rich in various growth factors and bioactive molecules that can stimulate tissue regeneration. One of these autologous blood products is platelet-rich fibrin (PRF), a second-generation product that has been extensively studied for its ability to support soft tissue wound healing and regeneration. This naturally derived fibrin scaffold is obtained through a simplified centrifugation process without the need for biochemical processing of the blood. Various studies have demonstrated PRF's effectiveness in accelerating tissue regeneration, enhancing angiogenesis, and improving wound healing outcomes. It is possible to use different protocols when obtaining PRF. The parameters used in the protocol affect the physical and chemical properties of the final product. By modifying these parameters, injectable PRF (I-PRF), also known as the injectable formulation of PRF, has been introduced as an enhanced reservoir system for biomolecules, providing a unique approach to tissue engineering and regenerative treatments. Current literature shows that I-PRF holds excellent promise as an innovative and versatile product in regenerative medicine.

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CV

2017 yıllında Ankara Üniversitesi Diş Hekimliği Fakültesi'nden mezun oldu. 2018 yılında Erciyes Üniversitesi Diş Hekimliği Fakültesi, Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda uzmanlık eğitimine başladı. 2024 yılında Ağız, Diş ve Çene Cerrahisi Uzmanı ünvanını aldı. Halen Erciyes Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda Uzm. Dt. olarak çalışmalarını sürdürmektedir.

In 2017, he graduated from Ankara University Faculty of Dentistry. In 2018, he started his specialty training at Erciyes University Faculty of Dentistry, Department of Oral and Maxillofacial Surgery. In 2024, he received the title of Oral and Maxillofacial Surgery Specialist. He is currently working as a Specialist Dentist at Erciyes University Faculty of Dentistry, Department of Oral and Maxillofacial Surgery.

ABSTRACT

Ortognatik Cerrahide Bilateral Sagittal Split Ramus Osteotomisi: Kritik Adımlar ve Teknik Detaylar

Ortognatik cerrahi, yüz bölgesindeki iskeletsel ve dental bozuklukları düzeltmek amacıyla uygulanır. Bu cerrahi müdahale, çenelerdeki sorunları düzelterek fonksiyonel ve estetik dengeyi sağlar. Başarılı bir cerrahi için titizlikle planlama yapılmalı, cerrahi rutin oluşturulmalı ve uygun enstrümanlar kullanılmalıdır. Bilateral sagittal split ramus osteotomisi mandibulanın yeniden konumlandırılmasında kullanılan en temel osteotomidir ve zamanla birçok modifikasyon geçirmiştir. Prosedür öncesinde ve sırasında yapılan detaylı planlama, yirmi yaş dişlerinin durumu, cerrahi alanın diseksiyonu, medial ve bukkal osteotomi yapılırken inferior alveoler sinirin korunması, proksimal ve distal segmentin doğru pozisyonlandırılması ve fiksasyonu, postoperatif yönetim gibi kritik adımları bulunmaktadır. Ayrıca, kondilin glenoid fossa içinde doğru konumlandırılması ve stabil bir maksillomandibular fiksasyonun sağlanması, prosedürün zorlu ancak en önemli adımlarıdır. Sonuç olarak, bilateral sagittal split ramus osteotomi cerrahisinin başarılı olabilmesi için teknik mükemmeliyetin yanı sıra, postoperatif takip ve hasta yönetimi de büyük önem taşımaktadı. Bu süreç, hastaların hem fonksiyonel hem de estetik açıdan beklentilerini karşılamayı ve yaşam kalitelerini artırmayı amaçlar.

Bilateral Sagittal Split Ramus Osteotomy in Orthognathic Surgery: Critical Steps and Technical Details

Orthognathic surgery is performed to correct skeletal and dental disorders in the facial region. This surgical intervention provides functional and aesthetic stability by correcting problems in the jaws. For a successful surgery, careful planning, surgical routine and appropriate instruments should be used. Bilateral sagittal split ramus osteotomy is the most basic osteotomy used to reposition the mandible and has undergone many modifications over time. It has critical steps such as detailed planning before and during the procedure, condition of the wisdom teeth, dissection of the surgical field, protection of the inferior alveolar nerve during medial and buccal osteotomy, correct positioning and fixation of the proximal and distal segments, and postoperative management. In addition, correct positioning of the condyle within the glenoid fossa and ensuring a stable maxillomandibular fixation are challenging but most important steps of the procedure. In conclusion, for bilateral sagittal split ramus osteotomy surgery to be successful, not only technical perfection but also postoperative follow-up and patient management are of great importance. This process aims to improve patients' quality of life and satisfy their expectations both functionally and aesthetically.

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Dr. Sümer MÜNEVVEROĞLU
Faculty of Dentistry - İstanbul Medipol University

CV

Sümer Münevveroğlu, 2016 yılında İstanbul Medipol Üniversitesi'nden diş hekimliği lisans derecesini tamamlamış ve aynı kurumda Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda doktora eğitimine devam etmiştir. 2021 yılında doktora eğitimini tamamlayarak, İstanbul Medipol Üniversitesi Ağız ve Çene Cerrahisi Anabilim Dalı'nda Dr. Öğr. Üyesi olarak atanmıştır. Araştırma ilgi alanları arasında yüz travmaları, ortognatik cerrahi ve dental implantlar bulunmaktadır.

Sümer Münevveroğlu completed his undergraduate degree in dentistry from Istanbul Medipol University in 2016, and then went on to pursue a PhD in maxillofacial surgery at the same institution. He successfully completed his PhD study in 2021 and was subsequently appointed as an Assistant Professor in the department of oral and maxillofacial surgery at Istanbul Medipol University. His research interests include facial trauma, orthognathic surgery and dental implants.

ABSTRACT

Doğal Baş Pozisyonunun Belirlenmesi ve Sanal Planlama Ortamına Aktarılması

Ortognatik cerrahide doğal baş pozisyonunun doğru belirlenmesi, sanal planlamanın başarısı için kritik bir rol oynar. Sanal planlama, cerrahlara ameliyat öncesinde sonuçları görselleştirme imkanı sunarak, etkinlik, doğruluk ve öngörülebilirlik açısından önemli avantajlar sağlar. Ayrıca, bu süreçte baş pozisyonunun önemi, yumuşak dokulara odaklanma gerekliliği nedeniyle daha da artmaktadır. Bu sunumda, sanal planlamada doğal baş pozisyonunun belirlenmesi ve sanal ortama doğru şekilde aktarılması için kullanılan yöntemler ve bunların klinik sonuçları ele alınacaktır .

Doğal baş pozisyonunu belirlemek için geliştirilmiş çeşitli yöntemler arasında inklinometre kullanımı, ayna ile veya aynasız "self-balance" tekniği, düzeltilmiş baş pozisyonu ve ufka bakış gibi yaklaşımlar bulunmaktadır. Bu pozisyon belirlendikten sonra, sanal ortama doğru aktarılması gerekmektedir. Literatürde, doğal baş pozisyonunun doğru şekilde aktarılmasını sağlamak amacıyla stereofotogrametri, fotoğraflara göre manuel yönlendirme, lazer ve cilt işaretleyicileri gibi çeşitli yöntemler tanımlanmıştır.

Bu sunum, maksillofasiyal cerrahide sanal planlamada doğal baş pozisyonunun doğru belirlenmesi ve transfer edilmesinin önemine odaklanmakta, mevcut yöntemlerin klinik açıdan değerlendirilmesini sunmaktadır. Baş pozisyonunun doğru belirlenmesi ve sanal ortama aktarılması, cerrahi başarının artırılması ve hasta memnuniyetinin iyileştirilmesi açısından büyük öneme sahiptir.

Determination and Transfer of Natural Head Position in Virtual Planning

Accurate determination of natural head position (NHP) plays a critical role in the success of virtual planning in orthognathic surgery. Virtual planning allows surgeons to visualize the desired outcomes preoperatively, providing significant advantages in terms of efficiency, accuracy, and predictability. Furthermore, the importance of NHP is heightened by the need to focus on soft tissues during this process. This presentation will explore the various methods used to determine NHP in virtual planning and their clinical outcomes.

Several methods have been developed to determine NHP, including the use of inclinometers, the mirror-based or mirrorless "self-balance" technique, adjusted head position, and eye-level gaze. Once NHP is established, it must be accurately transferred to the virtual environment. The literature describes various methods for achieving this transfer, including stereophotogrammetry, manual alignment based on photographs, laser and skin markers.

This presentation emphasizes the importance of accurately determining and ansferring NHP in virtual planning for maxillofacial surgery. It provides a clinical assessment of the existing methods and their significance. Proper determination and transfer of NHP are crucial for enhancing surgical success and improving patient satisfaction.

TAOMS'24
Turkish Association Of Oral and Maxillofacial Surgery
31st INTERNATIONAL SCIENTIFIC CONGRESS
09-13th OCTOBER 2024 / XANADU ISLAND - BODRUM

Dr. Görkem TEKİN
Faculty of Dentistry - Eskişehir Osmangazi University

CV

1990 yılında Biga'da doğdu, ilk, orta ve lise eğitimini Çanakkale'de tamamladı. 2009 yılında girdiği Cumhuriyet Üniversitesi Diş Hekimliği Fakültesinden 2014 yılında mezun oldu. 2017-2021 yılları arasında Eskişehir Osmangazi Üniversitesi Diş Hekimliği Fakültesi, Ağız Diş ve Çene Cerrahisinde Uzmanlık eğitimi aldı. 2023 yılında Eskişehir Osmangazi Üniversitesi Diş Hekimliği Fakültesi, Ağız Diş ve Çene Cerrahisi Anabilim Dalında başladığı Dr.Öğr.Üyeliği görevine halen devam etmektedir. Dr.Öğr.Üyesi Görkem TEKİN'in ulusal ve uluslararası dergilerde yayımlanmış bilimsel makaleleri, ulusal ve uluslararası kongrelerde sunulmuş kongre bildirileri mevcuttur.

He was born in Biga in 1990 and completed his primary, secondary and high school education in Çanakkale. He entered Cumhuriyet University Faculty of Dentistry in 2009 and graduated in 2014. Between 2017 and 2021, he pursued specialization in Oral and Maxillofacial Surgery at Eskişehir Osmangazi University Faculty of Dentistry. Since 2023, he has been serving as a Assistant Professor at the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Eskişehir Osmangazi University. Asst.Prof. Görkem Tekin has published scientific articles in national and international journals and has presented conference papers at national and international congresses.

ABSTRACT

TME Artrosentezinde Yeni Yaklaşım

Çalışmanın amacı Temporomandibular Eklem artrosentezinde intraket ile tek girişli artrosentez tekniğinin etkinliğini değerlendirmektir. Klinik değerlendirmede ağız açmada kısıtlılığı olan ve ağrısı olan, radyolojik incelemede redüksiyonsuz disk dislokasyonu tanısı alan sekiz hasta çalışmaya dahil edildi. Tüm işlemler lokal anestezi altında gerçekleştirildi. Periauriküler bölgenin dezenfeksiyonunun ardından eklem boşuğuna 1-2 ml %2 articain hidroklorür enjekte edilerek lokal anestezi sağlandı. Giriş noktası, tragus'un 10 mm önünde ve Holmund-Hellsing çizgisinin 2 mm altı olarak belirlendi. 16 gaugelik itraket ile eklem aralığına girildikten sonra 18 gaugelik itraket iğnesi ile eklem içi 80-100 ml ringer laktat solüsyonu ile yıkandı ve sonrasında İ-PRF uygulaması yapıldı. Operasyondan önce, operasyondan hemen sonra, 1. hafta ve 1. aydaki Maksimum ağız açıklığı (MAA) ve VAS ağrı skorları değerlendirildi. MAA, operasyondan hemen sonra, 1. hafta ve 1. ayda anlamlı derecede daha yüksek bulundu. VAS ağrı skorları operasyondan hemen sonra, 1. hafta ve 1. ayda anlamlı derecede daha az bulundu. Artrosentezde intraket tekniği TMB olan hastalarda ağrıyı önemli ölçüde azalttı, ağız açıklığını arttırdı ve mandibular fonksiyonları iyileştirdi. Ayrıca, bu teknik tek iğne girişinin konumlandırılmasıyla gerçekleştirilebilmektedir. Bu da daha az travmatik girişimi sağlamaktadır ve komplikasyon riski daha düşüktür.

A New Approach in TMJ Arthrocentesis

The aim of the study is to evaluate the efficacy of the single-entry arthrocentesis technique using an intraket in temporomandibular joint arthrocentesis. Eight patients who had limited mouth opening and pain in clinical evaluation and were diagnosed with disc dislocation without reduction in radiological examination were included in the study.All procedures were performed under local anesthesia. After disinfection of the periauricular region, 1-2 ml of 2% articaine hydrochloride was injected into the joint cavity to provide local anesthesia. The entry point was determined as 10 mm anterior to the tragus and 2 mm below the Holmund-Hellsing line. After entering the joint space with a 16-gauge intraket, the joint was irrigated with 80-100 ml of Ringer's lactate solution using an 18-gauge intraket needle, and then I-PRF application was performed. Maximum mouth opening (MMO) and VAS pain scores were evaluated before the operation, immediately after the operation, at 1 week, and at 1 month. MMO was found to be significantly higher immediately after the operation, at 1 week, and at 1 month. VAS pain scores were significantly lower immediately after the operation, at 1 week, and at 1 month. The intraket technique in arthrocentesis significantly reduced pain, increased mouth opening, and improved mandibular functions in patients with TMJ disorders. Additionally, this technique can be performed with the positioning of a single needle entry, which provides a less traumatic intervention and a lower risk of complications.

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Faculty of Dentistry - Ege University

CV

Hacettepe Üniversitesi Diş Hekimliği Fakültesi'nden 2017 yılında mezun olup 2019 yılında Ege Üniversitesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalında uzmanlık programına başlamıştır. 2023 yılında All-on four implant tedavileri ile ilgili tez çalışmasını gerçekleştirdikten sonra uzmanlık eğitimini tamamlamıştır. Halen Ege Üniversitesi Diş Hekimliği Fakültesi Ağız, Diş ve Çene Cerrahisi Anabilim Dalı'nda araştırma görevlisi olarak çalışmalarını sürdürmektedir. Çene yüz kırıkları, oral patolojiler, çene eklemi rahatsızlıkları, oral implantoloji, çene kist ve tümörleri mesleki ilgi alanları arasındadır.

Yıldız Ünüvar graduated from at Hacettepe University Faculty of Dentistry in 2017 and began a specialization program in the Department of Oral and Maxillofacial Surgery at Ege University in 2019. After completing a thesis on All-on-four implant treatments in 2023, she finished their specialty training. Currently, she is continuing their work as a research assistant in the Department of Oral and Maxillofacial Surgery at Ege University Faculty of Dentistry. Their professional interests include facial fractures, oral pathologies, temporomandibular joint disorders, oral implantology, and jaw cysts and tumors.

ABSTRACT

Maksiller Sinüsle İlişkili Dentigeröz Kistlerin Yönetimi ve Tedavisi: Gömülü Dişlerle İlişkili Patolojilerin Değerlendirilmesi

Dentigeröz kistler(DK) foliküler kist olarak da bilinmektedir. Sürmemiş bir dişin kronu ve mine epiteli arasında sıvı birikimiyle karakterize olan bu kistler biriken sıvı basıncıyla dişin alveolar kemikten uzaklaştırmasına neden olabilmektedir. Bu durum, genellikle 20 ila 40 yaş arası bireylerde daha sık görülmekte ve vakaların yaklaşık %75'ini mandibular üçüncü molar dişler oluşturmaktadır. DK'ler en sık bu dişlerle ilişkilendirilse de, bazen anterior maksillada bulunan gömülü süpernümerer dişlerden de kaynaklanabilir. Ancak, bu tür vakalar nadirdir ve tüm DK vakalarının yalnızca %5.5'ini oluşturur, bunların maksiller sinüse doğru genişlemesi ise daha da nadirdir. DK'ler maksiller sinüste bulunduğunda, kapsamlı bir değerlendirme şarttır. Ekstraoral ve intraoral muayenelerin yanı sıra uygun tanısal görüntüleme ve patolojik değerlendirmeler bu patolojilerin maksiller sinüzit ile karıştırılmasını önlemede oldukça önemlidir. Maksiller sinüste bulunan DK'ler için standart tedavi genellikle Caldwell-Luc yöntemi ile cerrahi olarak çıkarılmasını içerir. Ancak, kistin boyutu, yeri ve hastanın yaşı gibi faktörlere bağlı olarak marsupyalizasyon veya fonksiyonel endoskopik sinüs cerrahisi (FESS) gibi alternatif prosedürler de değerlendirilebilir. Sunumumuz maksiller sinüsle ilişkili gömülü dişler ve odontojenik kistlerin yönetimi ve tedavisini ele alarak, ilgili literatürün ışığında rehberlik ve bilgi sağlamayı amaçlamaktadır.

Management and Treatment of Dentigerous Cysts Associated with the Maxillary Sinus: Evaluation of Pathologies Caused by Impacted Teeth

Dentigerous cyst (DC), also known as a follicular cyst, is an odontogenic cyst characterized by the accumulation of fluid between the crown of an unerupted tooth and the enamel organ, resulting in the displacement of the crown from the alveolar bone. This condition predominantly occurs in individuals aged 20 to 40 years, with approximately 75% of cases involving the mandibular third molar. Although DCs are most commonly associated with these teeth, they can occasionally arise from impacted supernumerary teeth, particularly in the anterior maxilla. However, such instances are rare, accounting for only 5.5% of all DC cases, and those that expand into the maxillary sinus are even more uncommon. When DCs are present in the maxillary sinus, thorough evaluation is essential. This includes comprehensive extraoral and intraoral examinations, along with appropriate diagnostic imaging and pathological assessments, to avoid misdiagnosis, which could be mistaken for maxillary sinusitis. The standard treatment for DCs located in the maxillary sinus typically involves surgical removal via the Caldwell-Luc approach. However, alternative procedures such as marsupialization or functional endoscopic sinus surgery (FESS) may also be considered depending on factors such as the size and location of the cyst, as well as the patient's age. This study explores the management and treatment of impacted teeth and odontogenic cysts related to the maxillary sinus, providing insights and guidance based on a review of the relevant literature.

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[OP-006]

EXPERİMENTAL INVESTİGATİON OF THE EFFECTS OF ALLANTOİN ON MANDİBULAR DİSTRACTİON OSTEOGENESİS

Yonca KANAT[a], Mehmet Cihan BEREKET[b], Mehmet Emin ÖNGER[c], Metehan KESKİN[d]

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Abstract
Objective: This study aims to investigate the acute effects of local allantoin application on experimental distraction osteogenesis.
Materials-Methods: A total of 14 adult New Zealand rabbits underwent mandibular distraction under general anesthesia. The control group received saline washes, while the experimental group received local allantoin (1 mg/kg). After a 5-day latent phase, distraction was performed for 10 days at a rate of 0.7x1 mm daily. Following a 28-day consolidation period, rabbits were euthanized with high-dose anesthesia. Computed tomography (CT) was used to measure bone mineral density (HU). Stereological analysis of decalcified tissues, performed in a blinded, double-controlled manner using the Cavalieri Volume Measurement Method, assessed new bone, connective tissue, and vessel volumes (mm^3). Immunohistochemistry employed anti-RUNX2 and anti-BMP2 antibodies.
Results: In CT examination, the HU of the bone obtained in the experimental group was significantly increased compared to the control group. It was found significant that the volume of new bone, new connective tissue and new vessels obtained in stereological analysis was higher in the experimental group than in the control group. It was observed that anti-RUNX2 activity was more intense in the connective tissue area in the experimental group, and the connective tissue infiltration areas in the experimental group were more intensely positively stained in the sections stained with anti-BMP2.
Conclusions: The acute effects of local allantoin application on bone healing in distraction osteogenesis of the rabbit mandible were found to be positive.
Key words: allantoin, antioxidant, distraction osteogenesis

1. INTRODUCTİON

Distraction osteogenesis is a method for obtaining new bone by applying distraction-type forces to the callus formed between bone segments. The amount of movement achievable with traditional surgical methods in correcting craniofacial deformities is limited. A major factor here is the inability of soft tissues to adapt to large changes in bone with conventional methods. In distraction osteogenesis, the application of distractive forces to the callus allows for bone formation, while the surrounding soft tissues undergo changes known as distraction histogenesis, thereby addressing the limitations of traditional surgical treatments (1). Numerous studies have been conducted to enhance the quality of the new bone formed during distraction osteogenesis and to accelerate the healing process; these studies involve the use of biological materials, devices, and surgical techniques (2,5). In this study, the effects of allantoin applied to experimental groups on bone regeneration in distraction osteogenesis were compared with a control group and analyzed using stereological and immunohistochemical methods. Allantoin is a substance with antioxidant and anti-inflammatory properties that can be obtained from various plants or seeds (6).

2. MATERİALS AND METHODS

This study, is supported by Ondokuz Mayıs University (OMU) Project Management Office under project number PYO.DIS.1904.22.012, was conducted at the OMU Laboratory Animal Research and Application Center with the approval of the OMU Local Ethics Committee for Animal Experiments, dated June 23, 2022, and approval number 2022/21. Histological examinations were carried out at the

Department of Histology and Embryology, Faculty of Medicine, OMU, and radiological assessments were conducted at the Department of Radiology, Faculty of Medicine, OMU.

Fourteen adult New Zealand rabbits, each weighing 2.5-3 kg, obtained from the OMU Laboratory Animal Research and Application Center (DEHAM), were used in this study. The animals were randomly divided into two groups: a control group and a treatment group. Following intramuscular administration of 50 mg/kg ketamine HCl (Ketalar; Pfizer, Istanbul, Turkey) and 8 mg/kg Xylazine HCl (Rompun; Bayer, Istanbul, Turkey) for general anesthesia, the rabbits' lower left mandibles were shaved and antisepsis was achieved using povidone-iodine (Baticonol®, Dermosept, Turkey). A sterile perforated green drape was placed over the surgical area. Local infiltrative anesthesia was administered with 0.5 ml of 1:200,000 epinephrine-containing articaine (Ultracain-DS; Hoechst Marion Roussel, Istanbul, Turkey). A full-thickness incision was made on the skin and periosteum of the left mandible using a submandibular approach, and a flap was raised to expose the bone. Bone incision was performed with saline cooling, ensuring the preservation of the mental nerve between the first premolar and mental foramen (Figure 1). Distractors (Trimed, Elektron Medikal, Ankara, Turkey) providing a 0.35 mm extension per full rotation were secured to the bone with screws. In the control group, isotonic saline was applied to the surgical area, while the treatment group received a solution of allantoin (Fluka Analytical, Sigma-Aldrich Chemie, Germany) in isotonic saline (0.9% sodium chloride, Biofleks, Osel Pharmaceuticals, Turkey),(Figure 2). The surgical area was closed in layers, with resorbable sutures (4/0 Vicryl®, Johnson & Johnson, Brussels, Belgium) for subcutaneous tissues and non-resorbable sutures (4/0 Silk Suture, Doğsan, Trabzon, Turkey) for the skin. Postoperative pain and infection control were managed with intramuscular administration of analgesic (Tramadol, 1 mg/kg; Contramal, Abdi İbrahim, Istanbul, Turkey) and antibiotic (Cefazolin sodium, 50 mg/kg; Sefazol, M Nevzat, Istanbul, Turkey) for 10 days, and the surgical area was dressed with oxytetracycline hydrochloride spray (Neo Caf Spray, MSD, Italy) for 5 days. The animals' food and water intake, body weight, and general condition were monitored daily by a veterinary expert for 43 days. Cage cleanliness and optimal environmental conditions were maintained. After a 5-day latency period post-surgery, the distraction phase began with a daily 0.7 mm extension for 10 days, totaling a 7 mm lengthening. On the first day of distraction, 1 mg/kg allantoin solution was injected into the surgical area of the treatment group, while the control group received no injections. Following a 28-day consolidation phase, the animals were sacrificed with high doses of general anesthetic solution. Radiographic images of the skulls of the sacrificed animals were taken using high doses of Ketamine and Xylazine HCl. After 43 days post-operation, new bone areas resulting from distraction were collected as blocks, fixed in 10% formaldehyde solution, and decalcified in 5% formic acid for 90 days. The tissues were dehydrated through graded alcohol series, cleared with xylene, and embedded in paraffin at 58°C. For stereological analysis, 15 µm thick sections were obtained from paraffin-embedded blocks using a microtome (Leica RM2245, Nussloch, Germany), deparaffinized, and stained with hematoxylin-eosin. The sampling fraction for stereological analysis was set to 1/20, with images analyzed using a light microscope (Olympus, Center Valley, PA, Japan) equipped with a camera (Carl Zeiss, Germany). New bone volume, new connective tissue volume, and new vessel volume were calculated in mm^3 using the Cavalieri Volume Measurement Method. For immunohistochemical analysis, one paraffin block from each group was used. Four µm thick sections from each tissue sample were deparaffinized and evaluated with Mouse and Rabbit Specific HRP/DAB Detection IHC Kit (Abcam, USA) using anti-RUNX2 (dilution: 1/100; Sc390351, Santa-Cruz, USA) and anti-BMP2 (dilution: 1/200; ab6285, Abcam, USA) antibodies. Mayer's hematoxylin was used for counterstaining.

To visualize the new bone areas post-distraction osteogenesis radiologically, direct radiographs and computed tomography (CT) images of the skulls of sacrificed animals were obtained. CT images were acquired with 1 mm collimation, 250 mAS, and 120 kV, 512x512 matrix size, 0.5 mm slice thickness, and bone algorithm. Bone density in the distraction area was measured in Hounsfield Units (HU) using Osirix 10.0 software (Anova, Brazil). Measurements were repeated three times, and the results were averaged to compare bone densities between the experimental and control groups.

Histological data were analyzed using GraphPad Prism 9.5.1 (528). Statistical differences between groups were assessed using One-Way ANOVA. Radiological data were analyzed with IBM SPSS V23, with normal distribution assessed using the Shapiro-Wilk test. Mann-Whitney U test was used for comparisons of non-normally distributed data between groups, with significance set at $p<0.05$.

3. RESULTS

A total of 12 rabbits completed the experimental process, with 5 in the control group and 7 in the experimental group. Two rabbits from the control group were lost before completing the process. Due to the unilateral distraction, all rabbits exhibited a 7 mm elongation in the left mandible, resulting in deviation towards the right and misalignment of the incisors (Figure 3). Stereological analyses indicated that the new bone, connective tissue, and vascular volumes were significantly higher in the experimental group compared to the control group (Table 1-3). The difference in new bone volume was statistically significant ($p<0.001$), and the new connective tissue and vascular volumes were also significantly higher in the experimental group (connective tissue $p<0.001$; vascular $p=0.006$). Light microscopic images revealed denser areas of new bone and blood vessels in the experimental group. Additionally, areas of connective tissue infiltration were observed in the experimental group. Neovascularization in regions of new bone formation was evident in both groups (Figure 4). Immunohistochemical staining revealed that anti-RUNX2 activity was more intensely positive in the connective tissue of the experimental group (Figure 5). Analysis of anti-BMP2 staining showed more intense positivity in connective tissue infiltration areas in the experimental group),(Figure6). The mineral density of the new bone in the experimental group was significantly higher than that in the control group ($p=0.041$), with a median bone density of 645.15 HU in the experimental group compared to 373.7 HU in the control group (Table 4).

4. DİSCUSSİON

Distraction osteogenesis is a special type of fracture healing. When a fracture occurs in the bone, local ischemia resulting from damage to the medullary vessels leads to an increase in free oxygen radicals. These free oxygen radicals negatively affect bone healing by impairing osteoblast function, activating osteoclasts, and causing osteocyte death (7-9). Aranovic et al. have argued that the oxidative stress is intense in the distraction region and, therefore, the use of antioxidants would contribute to bone healing during distraction osteogenesis (10). Various pharmacological agents and components with antioxidant and anti-inflammatory properties have been used to improve callus quality and support bone healing in distraction osteogenesis. This study has demonstrated, using stereological and immunohistochemical methods, that allantoin, known for its antioxidant and anti-inflammatory properties, enhances bone regeneration in distraction osteogenesis. Animal models such as rats, rabbits, pigs, dogs, monkeys, and sheep have been used in experimental mandibular distraction osteogenesis (11,12). The rabbit model is widely used in mandibular distraction due to its simple surgical protocols, low cost, medium jaw size, and bone quality similar to human bone (11,13). Based on the literature, distraction osteogenesis was applied to the rabbit model in our study. Distraction osteogenesis is divided into four stages: the osteotomy phase, the latent phase, the distraction phase, and the consolidation phase (14,15). The stage where bone segments are separated is the osteotomy phase. The latent phase, during which callus formation occurs, follows the osteotomy phase. The duration of the latent phase varies depending on the species, age, and healing capacity of the animal. Literature reports suggest that a 5-7 day latent phase is optimal for rabbit models (16). Based on these data, the latent phase in our study was set to 5 days. The distraction phase begins when the callus formed during the latent phase is stretched by applying tensile force. The speed and rhythm chosen during the distraction phase significantly affect the quality of the newly formed bone. Stewart et al. reported that ideal bone healing was achieved in a group with a daily distraction of 1 mm, while distraction exceeding 1 mm per day resulted in fibrous union (5). In this study, a distraction rate of 0.7 mm per day was achieved with the available distractors. It is reported that a consolidation phase lasting 2 or 4 weeks is sufficient for examining early bone changes in experimental studies (13). Since our study aimed to investigate the acute effects of local allantoin application on the distraction region, the consolidation phase was set to 28 days. Allantoin is a compound with antioxidant and anti-inflammatory properties, known for its ability to stimulate cell mitosis, moisturize, and remove necrotic tissue, and can be isolated from plants or insects (6,17). Our literature review found that allantoin has been used topically or as an irrigation agent to study its effects on soft tissue, nerve tissue, or open wound healing (6,17,18). Li et al. conducted a study on the effects of allantoin on fracture healing in zebrafish (19). However, there are no studies on the effects of allantoin on callus formation in distraction osteogenesis in mammalian models. Based on the literature, this study is a unique investigation that explores the effects of allantoin on bone healing in mammalian models and demonstrates that allantoin contributes to bone regeneration by stimulating mesenchymal stem cell differentiation in an experimental distraction osteogenesis model. To examine the bone tissue obtained from distraction osteogenesis, stereological and immunohistochemical evaluation methods can be used (20-22). Our study's primary methodological approach is based on the unbiased and effective stereological methods. We compared the new bone volume, new connective tissue volume, and new vascular volume between two groups. In our study, we found that allantoin significantly

increased the new bone tissue volume in the distraction osteogenesis group compared to the control group. Similar stereological methods were used in Wei et al.'s study, which reported that icariin, known for its antioxidant activity, increased new bone volume in experimental distraction osteogenesis. The data obtained in our study support the findings of Wei et al (13). Our stereological analysis showed that allantoin caused a significant increase in connective tissue volume during distraction osteogenesis. This early increase in connective tissue indicates its potential for transforming into new bone. Erdoğan et al.'s study on the antioxidant Capparis spinoza extract also reported an increase in connective tissue volume using stereological analysis, which is consistent with our results (23). An important data point in our study was the amount of new vascular volume. The contribution of new vascularization in callus to the healing process is undeniable. The analyses revealed a statistically significant difference in new vascular volume in the experimental group compared to the control group. Akçay et al., using similar stereological methods to investigate the effects of vitamin E on experimental mandibular distraction osteogenesis, reported an increase in new vascular volume in the vitamin E group (24). Allantoin, like vitamin E, statistically increased the amount of new vascularization in the distraction osteogenesis callus and contributed to the vascularization process. In this study, we also analyzed the immunohistochemical staining of anti-RUNX2 and anti-BMP2 antibodies to explain the mechanisms underlying the increased volume values observed in the experimental group compared to the control group. Our study showed that anti-RUNX2 and anti-BMP2 activities were more intense in the connective tissue area of the experimental group compared to the control group. Liu et al. demonstrated the positive effects of accordion technique on mesenchymal cell differentiation into osteoblasts using anti-RUNX2 staining in distraction osteogenesis (25). Our findings, consistent with Liu et al.'s results, indicate that allantoin has a positive effect on the differentiation of mesenchymal cells into osteoblasts. Kumabe et al. investigated the effects of percutaneous CO_2 treatment in distraction osteogenesis and demonstrated increased osteogenic activity in mesenchymal cells using anti-BMP2 (26). In this regard, the effect of allantoin on osteogenic activity in experimental distraction osteogenesis is similar to the results obtained with percutaneous CO_2 treatment.

5. CONCLUSİON

This study is the first to investigate the effects of allantoin on bone healing in distraction osteogenesis. As such, it is anticipated to serve as a guide for future experimental and clinical research. The data obtained support the stereological results. Using the Cavalieri principle, new bone ($p<0.001$), new connective tissue ($p<0.001$), and new vascular volume ($p=0.006$) were quantified in distraction osteogenesis; significant increases in new bone, new connective tissue, and new vascular volumes were found in the allantoin-treated group compared to the control group. The greater presence of connective tissue infiltration areas in the allantoin-treated group suggests a higher reserve of stem cells in these regions. Immunohistochemical examination revealed that areas with anti-RUNX2 activity indicate cells transitioning from mesenchymal stem cells to osteoblasts. Regions with high anti-BMP2 activity reflect increased osteogenic activity of mesenchymal cells. Enhanced vascularization in the allantoin-treated group provides evidence that allantoin induces neoangiogenesis. Measurements of bone mineral density (HU) showed that the bone mineral density in the allantoin-treated group was significantly higher than in the control group ($p=0.041$). The local application of allantoin demonstrated positive acute effects (28 days) on bone healing and vascularization in rabbit mandibles. Studies investigating different doses, routes of administration, and longer treatment durations are needed to determine the dose-dependent, route-dependent, and time-dependent effects of allantoin on distraction osteogenesis.

6. REFERENCES

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FİGURES

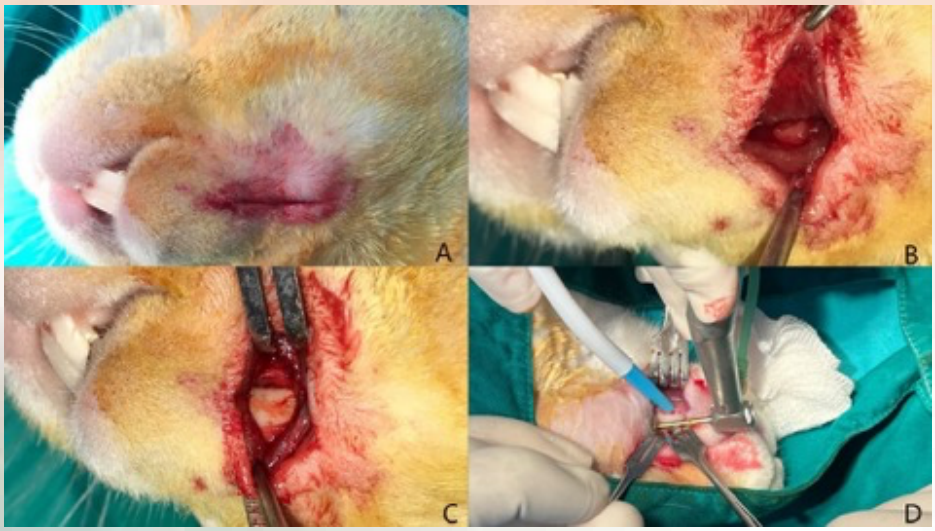

Figure 1: Incision line (A), tissue layers (B,C) and performing osteotomy (D)

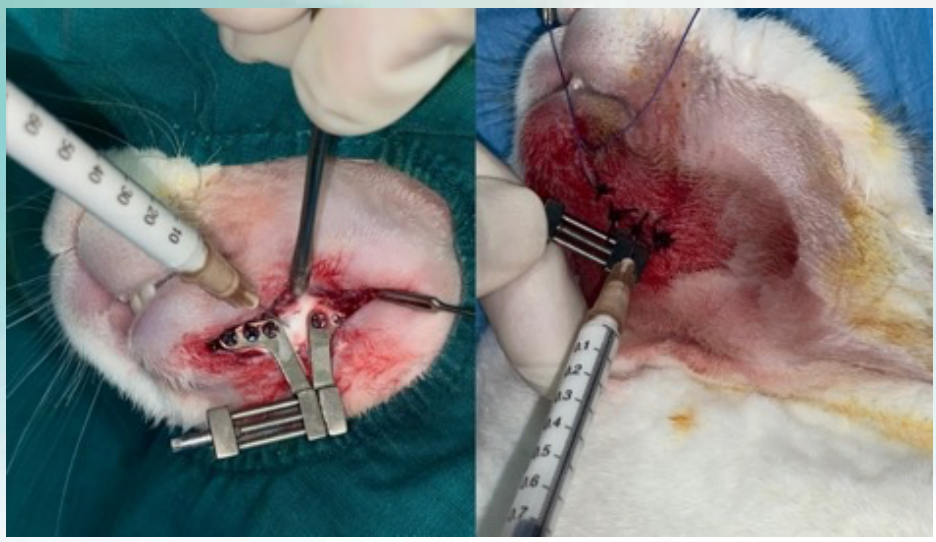

Figure 2: Application of allantoin to experimental groups

Figure 3: Normal occlusion (A) and deviation from midline after distraction (B)

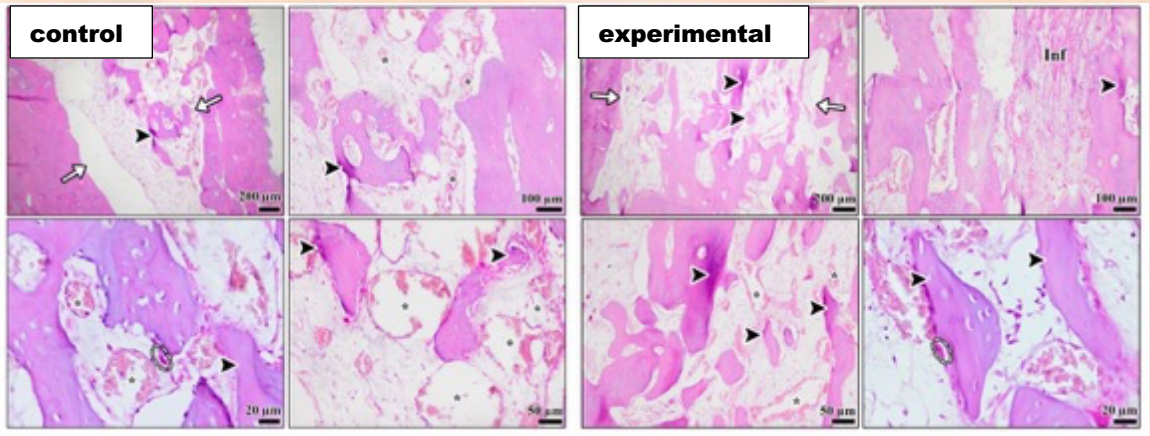

Figure 4: Histological images of the control and experimental groups are shown. In the low magnification images, the new bone formations in the distraction area are indicated between two white arrows. The new bone areas are marked with arrowheads. Vascularization of the tissue is shown with "*". Osteoblasts surrounding the newly formed bones are observed within dashed circles. The density of the vessels surrounding the newly formed bones is notable. Inf: Connective tissue infiltration. Staining: Hematoxylin-eosin.

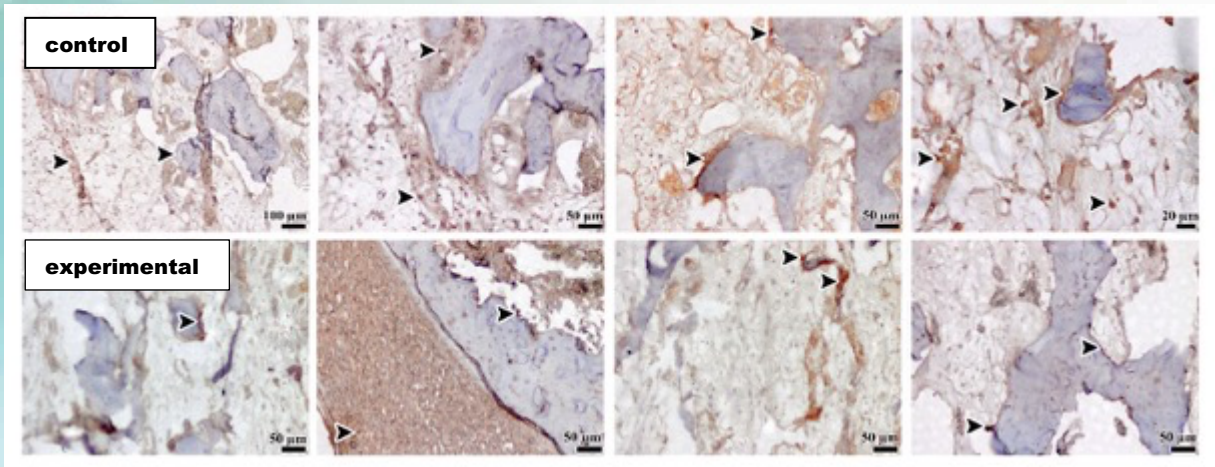

Figure 5: Immunohistochemical staining for anti-RUNX2 in the groups is shown. Positive staining is indicated with arrowheads. For the counterstaining, Mayer's Hematoxylin was used.

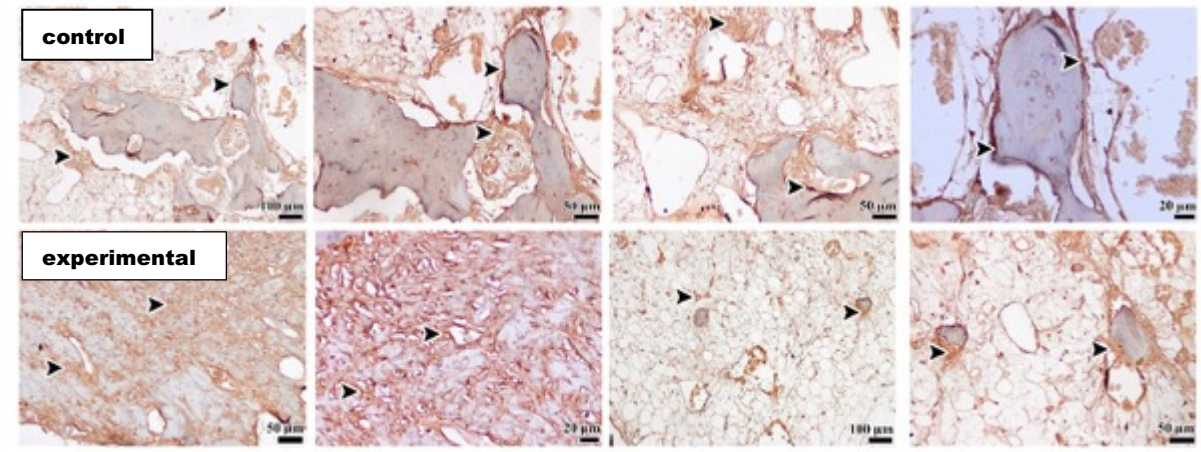

Figure 6: Immunohistochemical staining for anti-BMP2 in the groups is shown. Positive staining is indicated with arrowheads. For the counterstaining, Mayer's Hematoxylin was used.

TABLES

Table 1: New bone volume values (mm³) in the control and experimental groups (mean ± SD)

Groups	New Bone Volume (Mean ± SD) (mm3)	p*
Control Group	53.39 ± 9.213	<0.001
Experimental Group	82.13 ± 0.951	

* One-Way ANOVA test, SD: Standard Deviation

Table 2: New connective tissue volume values (mm³) in the control and experimental groups (mean ± SD)

Groups	New Connective Tissue Volume (Mean ± SD) (mm3)	p*
Control Group	7.3 ± 4.883	<0.001
Experimental Group	121.3 ± 10.87	

* One-Way ANOVA test, SD: Standard Deviation

Table 3: New vessel volume values (mm³) in the control and experimental groups (mean ± SD)

Groups	New Vascular Volume (Mean ± SD) (mm3)	p*
Control Group	9.9 ± 2.173	0.006
Experimental Group	16.8 ± 3.58	

* One-Way ANOVA test, SD: Standard Deviation

Table 4: Comparison of bone mineral density values (HU) between the groups

	Bone Mineral Density		test statistic	p*
	Mean ± SD	Hydrangea (Min-Mak)		
Group				
Experiment	645.15 ± 123.71	645.15 (383.34 – 743.45)	5	**0.041**
Control	479.66 ± 159.62	373.7 (345.61 – 669.73)		
Total	576.2 ± 157.72	645.15 (345.61 – 743.45)		

* Mann Whitney U test, SD: Standard Deviation

[OP-014]

Dental İmplant Uygulama Sonrası Gelişen Geç Radyoterapi Sekeli: Olgu Sunumu ve Literatür Derlemesi

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ÖZET

Amaç
Radyoterapi baş ve boyun bölgesi malignitelerinin tedavisinde yaygın olarak kullanılan bir tedavi yöntemidir. Ancak radyoterapinin hiposalivasyon, disfaji, doku nekrozu gibi komplikasyonlara yol açtığı bilinmektedir. Bu komplikasyonlar radyoterapi esnasında veya radyoterapiden 2-3 hafta sonrasında oluşmasına göre erken radyoterapi sekeli; radyoterapiden 3 ay sonraki zaman diliminde oluşmasına göre geç radyoterapi sekeli olarak sınıflandırılmaktadır. Bu olgu sunumunda 26 yıl önce baş boyun bölgesinden radyoterapi alan bir vakada dental implant uygulaması sonrası geç radyoterapi sekeli olarak gelişen nekrozun takibi, tedavisi ve yönetimi paylaşılmıştır.

Olgu Sunumu
Yetmiş dört yaşında erkek hasta dişsizlik şikâyeti ile kliniğimize başvurmuştur. Hastadan alınan anamneze göre 26 yıl önce dudak kanseri teşhisi nedeniyle opere olduğu ve radyoterapi aldığı öğrenilmiştir.

Hastanın orifisinin darlığı hareketli protezin kullanılamamasına neden olacağı için implant destekli sabit protetik restorasyon planlanmıştır. Herhangi bir sistemik hastalığı olmadığı opere olduktan sonra nüks hikayesi olmaması nedeniyle hastaya implant uygulanmasına karar verilmiştir. Post-operatif 1.haftada hastanın mandibulasında mukozal nekroz gözlenmiştir. Post-operatif dönemde ekspoze kemik alan, klorheksidinli serum fizyolojikle pansumana başlanmıştır. Ayrıca hastaya debridman ile biyostimülasyon amacıyla lazer terapi, ozon terapi ve topikal hyaluronik asit uygulanmıştır.

Uygulanan tedaviler sonucunda işlem bölgesinde enfeksiyon gelişmediği; ilgili bölgede kemikte sekestr alanları oluşarak kalan kemik yer yer mukozal kapanmalarla izlenmiştir. Tedavisi devam etmekte olan hastanın genel durumu olumlu seyretmektedir.

Sonuç
Bu olgu sunumu radyoterapinin, dental implant uygulamalarında çok uzun yıllar sonra bile komplikasyonlara yol açabileceğini ve geç radyoterapi sekellerinin tedavilerinin uzun dönem takip gerektirebileceğini göstermektedir.

Anahtar Kelimeler: Biyostimülasyon, Dental İmplant, Geç Radyoterapi Sekeli, Radyoterapi

1.Giriş
Malign tümörlerin %3'ünü oluşturan baş-boyun kanserleri epidemiyolojik verilere göre, dünya genelinde en sık görülen altıncı kanserdir ve yıllık insidansı yaklaşık 900.000 vakadır. (1,2) Bu tümörler orofarenks, ağız boşluğu, dudaklar, gırtlak, hipofarenks, paranazal sinüsler ve tükürük bezlerindeki alanları içerir. Baş ve boyun kanserinin en yaygın türü skuamöz hücreli karsinomdur. En önemli etiyolojik risk faktörleri sigara ve alkol tüketimidir. Ayrıca yıllık mortalitesi %50'yi aşmaktadır ve gelişmekte olan ülkelerde daha yüksektir. (3)

Radyoterapi baş ve boyun kanseri tedavilerinden biridir. İleri kanser vakalarında genellikle cerrahi ve/veya kemoterapi ile birlikte kullanılır. Radyoterapinin hiposalivasyon, disfaji, mukozitis, yumuşak doku nekrozu, osteoradyonekroz gibi komplikasyonlara yol açtığı bilinmektedir. (2) Bu komplikasyonlar radyoterapi esnasında veya radyoterapiden 2-3 hafta sonrasında oluşmasına göre erken radyoterapi sekeli; radyoterapiden 3 ay sonraki zaman diliminde oluşmasına göre geç radyoterapi sekeli olarak sınıflandırılmaktadır. (4)

Hastaların çoğunun yaşlı ve/veya kapsamlı ablatif cerrahi geçirmiş olması göz önünde bulundurulduğunda, hastaların dişlerinin eksik olması ve yaşam kalitelerinin ciddi şekilde düşmesi kaçınılmazdır. (2)

Geleneksel hareketli protezlerin kullanımı mukozit, ağız kuruluğu ve oral orifisteki değişiklikler nedeniyle uygun olmayabilmektedir, bu nedenle dental implantlar bu tür hastaların rehabilitasyonunda önemli bir tedavi seçeneği haline gelmiştir. (2) Sistematik derlemelerde radyoterapiden 12 ay geçtikten sonra bu hastalara dental implant tedavilerinin başarılı bir şekilde yapılabileceği bildirilmiştir. (3)

Bu olgu sunumunda 26 yıl gibi uzun bir süre önce baş boyun bölgesinden radyoterapi alan bir hastada dental implant uygulama sonrası geç radyoterapi sekeli olarak gelişen osteoradyonekrozun takibi, tedavisi ve yönetimi paylaşılmıştır.

2.Vaka Raporu

Yetmiş dört yaşında erkek hasta dişsizlik şikâyeti ile kliniğimize başvurmuştur. Hastadan alınan anamneze göre 26 yıl önce dudak kanseri teşhisi nedeniyle opere olduğu ve radyoterapi aldığı öğrenilmiştir

Hastanın dudak kanseri tedavisi sonucunda oral orifisi daralmış ve bu durum hareketli protezin hasta tarafından kullanılamamasına neden olacağı için implant destekli sabit protetik restorasyon planlanmıştır.

Herhangi bir sistemik hastalığı ve opere olduktan sonra nüks hikayesi olmaması nedeniyle dental implant (Microcone, Medentika, Almanya) planlanan hastanın maksillasına 5 adet, mandibulasına da 5 adet implant uygulanmasına karar verilmiştir.

İlk seansında maksillaya implantlar uygulanmış, herhangi bir olumsuz durumla karşılaşılmamıştır.

10 gün sonrasındaki ikinci seansında mandibulaya implantlar uygulanmıştır. Post-operatif 3. gün takibinde hastanın ilaçlarını yutamaması sebebiyle antibiyotik ve anti-enflamatuar ilaçlarını alamadığı öğrenilmiştir. Bu seansta alt çenede ödem ve ağrının olduğu gözlenmiş hastaya intramuskuler antibiyotik başlanarak yakın takibe alınmıştır.

Post-operatif ilk haftada mandibuladaki cerrahi alanın mukozal nekroza uğradığı gözlenmiştir. Buradaki ekspoze kemik alan klorheksidinli serum fizyolojikle belli periyotlarla pansumana başlanmış, plaktan ve yiyecek artıklarından temizlenerek olası enfeksiyon önlenmek istenmiştir. Ayrıca hastaya yine belli periyotlar dahilinde debridman ile biyostimülasyon amacıyla lazer terapi (EPIC™X, BIOLASE, ABD), ozon terapi (Ozone DTA, APOZA, Tayvan) ve topikal hyaluronik asit uygulanmıştır.(5)

Uygulanan tedaviler sonucunda post-operatif 7 aylık dönemde işlem bölgesinde enfeksiyon gelişmediği; ilgili bölgede kemikte sekestr alanları oluşarak kalan kemiğin yer yer mukozal kapanmaları izlenmiştir. Tedavisi devam etmekte olan hastanın genel durumu olumlu seyretmektedir.

3.Tartışma

Radyoterapi alan hastalarda dental implant tedavileri uzun bir dönem araştırılmış ve birçok sistematik derleme ortaya konmuştur. Bu araştırmalar radyoterapi alan hastalardaki dental implant uygulamalarına yönelik radyoterapiden sonraki geçen zamana, radyasyonun dozuna ve implantın konumuna göre birtakım veriler ortaya koymuştur. (2)

Radyoterapiyi takiben revaskülarizasyon ve neoosteogenezin başlaması 3-6 ay sürdüğü çalışmalarda tespit edilmiştir. (2) Marx ve ark. (6) çalışmalarında radyasyonun akut etkilerinin ilk 6 ay içinde azaldığını ve kronik etkilerin vasküler hasarı 18 aydan sonra daha da kötüleştirdiğini bu nedenle radyoterapi sonrası implantların 6-18 aylık pencere döneminde yapılmasını önermiştir. Camolesi ve ark. ile Kende ve ark. yaptığı çalışmalarda radyoterapiden yaklaşık 12 ay sonra implant tedavilerinin başarılarının tatmin edici sonuçları olduğunu belirtmişlerdir. (3,7) Bu vakada hastanın 26 yıl gibi çok uzun süre sonra geç radyoterapi sekeline bağlı osteoradyonekrozu gözlenmiştir.

Yapılan çalışmalar implant uygulanan çeneye göre implantların mandibuladaki sağ kalım oranının maksilladan daha yüksek olduğunu desteklemektedir. Çalışmalar bunun primer stabilite ve kemik kalitesi ile ilgili olabileceğini belirtmektedir. (2) Ancak bu olguda maksilladan ziyade mandibulada erken dönemde komplikasyonla karşılaşılmıştır. Uzun dönemdeki başarı için herhangi bir değerlendirme yapmak şu aşamada mümkün değildir çünkü protetik aşamaya henüz geçilememiştir.

Alınan radyasyonun dozuna göre Anderson ve arkadaşlarının yaptığı çalışmada implant uygulama için değerlendirme ve öneriler (Tablo 1) belirtilmiştir. (2) Bu olgu sunumunda hastanın aldığı radyasyon dozu bilinmemektedir. Çok uzun zaman geçmesine rağmen geç radyoterapi sekeli ile karşılaşılması hastanın yüksek doz radyoterapi aldığını düşündürmüştür.

4.Sonuç

Bu olgu sunumu radyoterapi alan hastaların değerlendirilmesindeki mevcut literatüri de inceleyerek, dental implant uygulamalarının çok uzun yıllar sonra bile komplikasyonlara yol açabileceğini ve geç radyoterapi sekellerinin tedavilerinin uzun dönem takip gerektirebileceğini göstermektedir.

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6.Tablo

Tablo 1: Radyasyon dozuna göre implant uygulama değerlendirmeleri

Radyasyon Dozu	**Risk Değerlendirmesi**	**Öneriler**
50 Gy'den düşük	Düşük risk	Standart önlemler geçerlidir
50-65 Gy arası	Orta risk	Dikkatli implant yerleştirme
65-74 Gy arası	Nispeten yüksek risk	Hiperbarik oksijen tedavisi gibi diğer önlemler alınmadıkça implant yerleştirme önerilmez
75-120 Gy arası	Yüksek risk	İmplant yerleştirilmesi önerilmez.

[OP-018]

Garre's Osteomyelitis

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Abstract

Objective: Garrè's osteomyelitis is a rare inflammatory disease of chronic nature, characterized by periosteal reactions, which induces bone neoformation. Garrè's osteomyelitis is most commonly reported jaw bones. We aimed to present the extraoral, intraoral, and radiographic findings and postoperative pursuits of a patient diagnosed with Garrè's osteomyelitis.
Case: 9-year-old patient presented to Istanbul University Faculty of Dentistry Department of Oral and Maxillofacial Surgery due to severe swelling and facial asymmetry in the right mandibular region. Due to clinical and radiological examinations, the patient was diagnosed with Garrè's osteomyelitis. The patient was operated in our clinic under local anesthesia. The postoperative review showed a marked reduction in the size of the swelling and normalized face contour.
Conclusion: Garrè's osteomyelitis in pediatric patients is usually curable with early diagnosis and adequate treatment. Once the source of infection is eliminated and the reactive bone tissue is removed with surgical treatment, original facial symmetry will be restored.
Keywords: Garre's osteomyelitis, periostitis ossificans, surgical treatment

Introduction

Garrè's osteomyelitis is a rare chronic inflammatory disease characterized by periosteal reactions, which induce bone neoformation with an onion skin pattern of cortical bone duplication.

Garrè's osteomyelitis is most commonly reported on jaw bones (1). Most reported cases are unifocal and unilateral (2).

Garrè's osteomyelitis affects relatively young patients and is usually seen at the mandibular molar region. This predisposition is because the maxilla has a rich vascular supply and thin cortical plates, while the blood supply to the mandible is only limited to the inferior alveolar artery (3). It often occurs in the first molar region of the mandible due to caries and other similar causes, and it is rarely associated with impacted teeth. Typically, there is swelling in the affected area caused by the lesion unilaterally expanding to the outer surface of the bone, and facial asymmetry is caused by swelling. Though it's defined as nonsupurative, there are cases reported of fistulas on the skin. The other symptoms are fever, lymphadenopathy, and leukocytosis (4).

The radiographic appearance of Garrè's osteomyelitis includes radiopaque laminations that are roughly parallel to each other and the underlying cortical surface, giving an onion-skin appearance. Radiolucent separation is present between newly formed and original bone (5).

Case Report

A nine-year-old boy presented to Istanbul University Faculty of Dentistry Department of Oral and Maxillofacial Surgery due to swelling on the right mandibular molar region present for the previous 45 days. We were informed that the patient had two primary teeth extractions from the same area a month before swelling occurred. The patient had been treated with antibiotics by an MD when swelling occurred, but the treatment caused no significant reduction in the size of the swelling.

The patient's medical history was non-significant. On examination, there was a focal, non-fluctuant swelling of the right side of the body of the mandible (Fig. 1(a)). The swelling was bony and hard in

consistency with mild tenderness. Skin and mucosa over the swelling were normal. In the oral examination, the first molar tooth of the right mandible was found to have a caries cavity (Fig. 1(b)).

An orthopantomographic X-ray revealed lamellar appearance on the external cortical surface of the mandible as well as at the lower edge of the mandibular corpus, showing focal new bone formation (Fig. 2). On the axial and frontal plans of cone-beam computed tomography (CBCT), a tunnel-like defect was identified in the cortical bone in the lateral surface of the inflamed bone (Fig. 3).

When all these findings were evaluated, it was concluded that the pathologic lesion was Garre's osteomyelitis.

The patient was operated in our clinic under local anesthesia. In the operational area, bone deposition was observed on the lateral surface of the mandible. Newly formed bone was observed to be soft and peeled as layers with minimal pressure. A marked reduction in the size of the swelling and normalized face contour was observed one month after the operation. (Fig. 4). Five months later, the postoperative orthopantomographic X-ray showed normal bone structure (Fig. 5).

Discussion

Garre's osteomyelitis is a lesion with a large amount of periosteal reaction. Its development depends on the interplay of chronic infection, the activity of the osteoblastic cells in the periosteum, the virulence of the infectious agents, and host resistance. This lesion is seen exclusively in children or young adults because of a periosteum capable of vigorous osteoblastic activity (5,6).

Owing to similar radiographic findings of 'onion skin' appearance, osteogenic sarcoma, infantile cortical hyperostosis, fibrous dysplasia, and Ewing's sarcoma could be considered differential diagnoses. Ewing's sarcoma and osteosarcoma can be distinguished from Garre's osteomyelitis by the "sun ray" appearance and "Codman triangle" in radiography, rapid bone enlargement and causing more osteolytic reactions in the bone (7,8). Orthopantomography or CBCT images are usually enough for the diagnosis.

Our patient demonstrated several demographic, clinical, and radiographic characteristics consistent with osteomyelitis with proliferative periostitis. The entity is an inflammatory disease primarily affecting children and adolescents with a mean age of 13 (9). The affected periosteum forms several rows of reactive bone, which clinically may manifest as extraoral swelling causing facial asymmetry, as seen in the present case; the overlying skin is usually normal. Intraorally, a hard swelling covered by normal mucosa may also be noticeable. The lesion may be asymptomatic or painful; the latter may be persistent or intermittent (10). In the present case, mild tenderness was reported, and the patient's main complaint was facial asymmetry due to swelling, having an adverse effect on the quality of life and psychology of the young patient and her family. Other neurologic symptoms, such as paresthesia in teeth, skin, and lip, may infrequently occur, while trismus is present in approximately 60% of the cases. Still, our patient did not show any neurological symptoms (11). In some cases, lymphadenopathy, fever, and weakness may also develop (11).

Conclusion

Garrè's osteomyelitis in pediatric patients is usually curable with early diagnosis and adequate treatment; however, if the correct diagnosis is delayed by more than six months, it may turn into a persistent and deforming phase. Management varies from conservative to surgical approach, including endodontic therapy, tooth extraction, and bone recontouring. Once the cause is removed, the bone will remodel itself gradually, and the original facial symmetry will be restored (11, 12).

Finally, a close patient follow-up is mandatory, at short intervals at the beginning, ensuring that bone growth has ceased and is in the regression process.

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Figures

Figure 1: Swelling of the right side of lower jaw. (a) Intraoral view showing buccal expansion. (b)

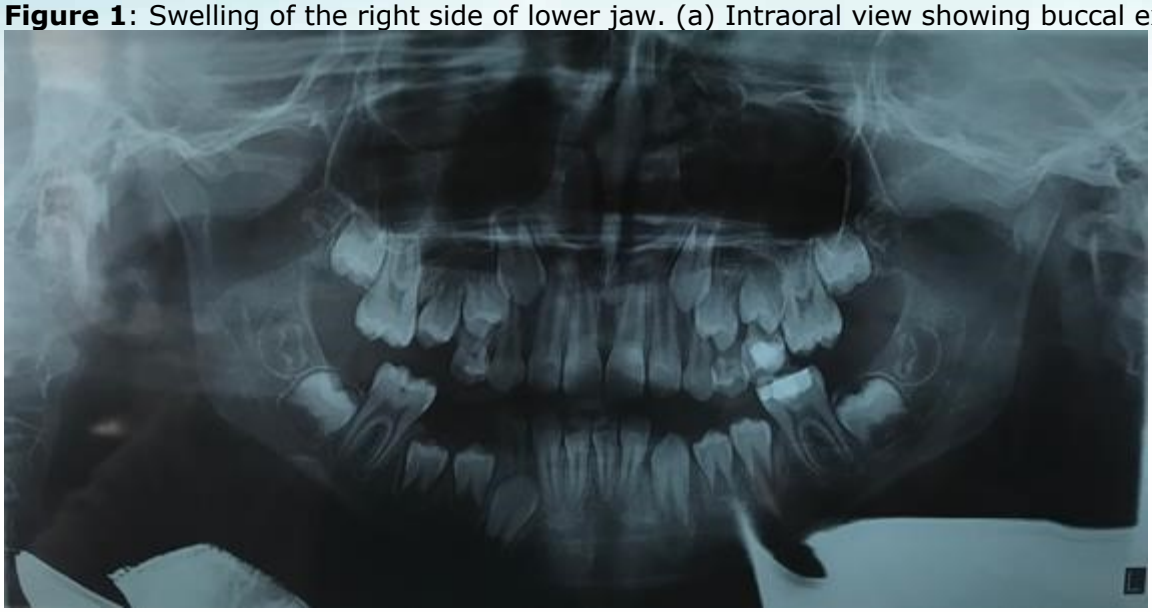

Figure 2: Orthopanthomographic X-ray revealed lamellar appearance on the cortical surface of the mandible, showing focal new bone formation.

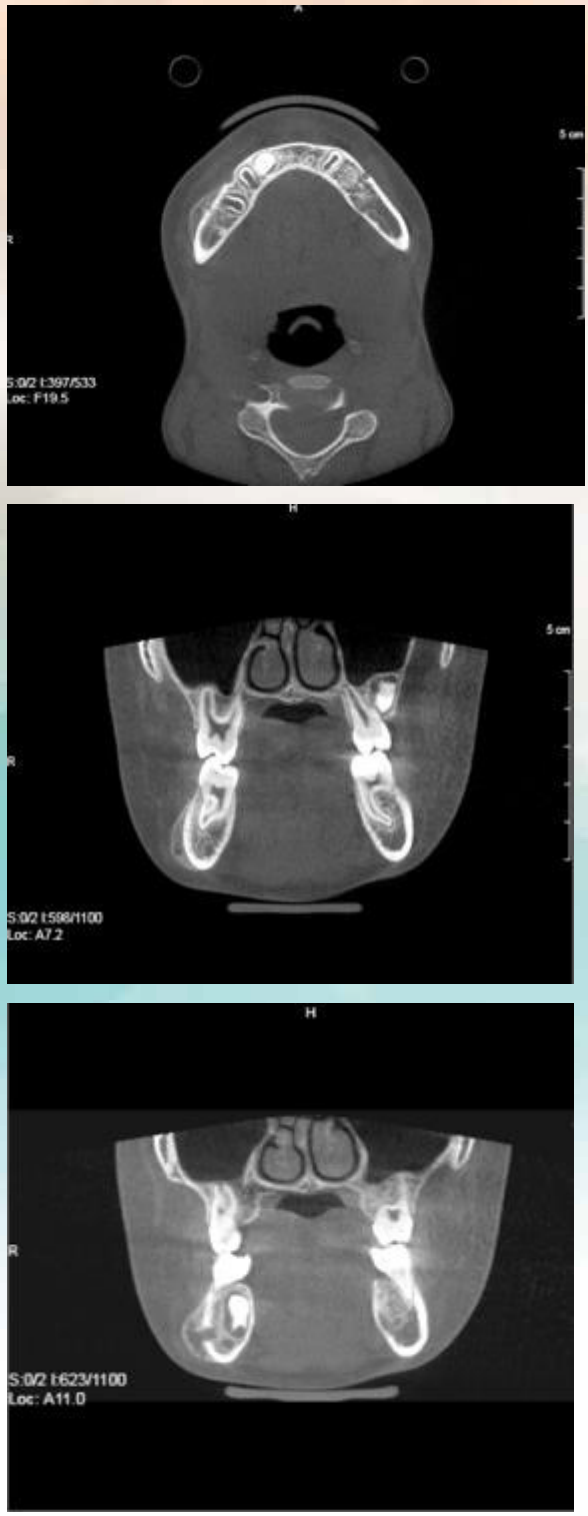

Figure 3: Axial and frontal planes in preoperative CBCT showing new bone formation and an onion-skin appearance in the lateral cortical surface and the tunnel defect of the inflamed bone.

Figure 4: 5th month postoperative review showed a marked reduction in the size of the swelling and normalized face contour.

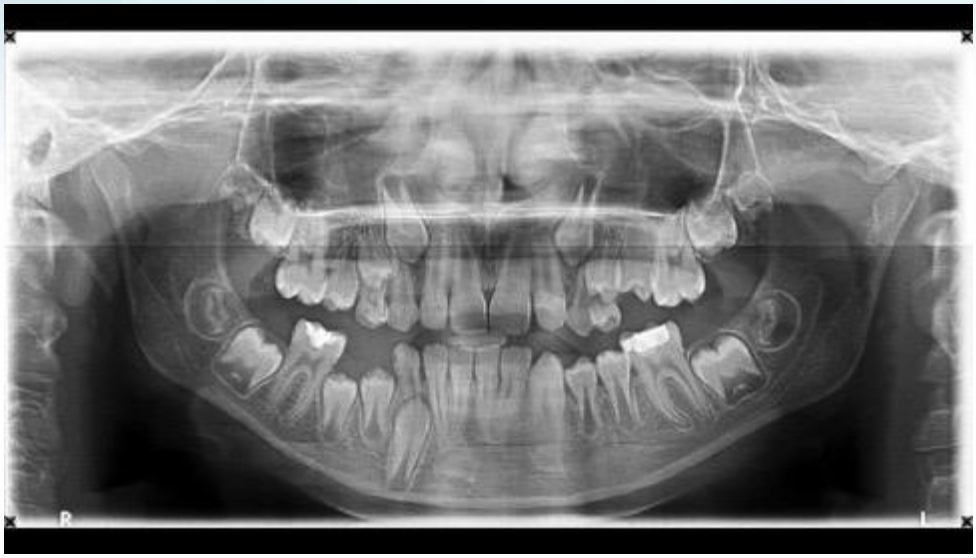

Figure 5: 5th month postoperative orthopantomographic X-ray showed normal bone structure.

[OP-019]

MEDICATION-RELATED OSTEONECROSIS OF JAWS: 3 CASES

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Abstract

Objectives: Osteonecrosis of the jaw (ONJ) is a rare and persistent pathology characterized by bone necrosis and progressive bone destruction due to compromised vascularization in the jaws. Medication-related osteonecrosis of the jaw (MRONJ) is a side effect that can occur in patients receiving antiresorptive and/or antiangiogenic treatments. The widespread use of bisphosphonates, denosumab and other antiresorptive agents in the treatment of malignancy-associated bone metastases, multiple myeloma and osteoporosis has contributed to the increased incidence of MRONJ. Although pathogenesis is not fully understood, it is thought to be triggered by factors such as suppression of bone metabolism, infection and trauma. The aim of this case report is to evaluate the efficacy of the treatment protocol we implemented in MRONJ cases.

Case: Three patients with the history of metastatic cancer, osteoporosis and multiple myeloma who had received antiresorptive therapy were included. Two of these patients presented to our clinic with severe jaw pain and purulent discharge following tooth extraction, while the third patient experienced similar symptoms after prolonged use of an ill-fitting removable prosthesis. Following clinical and radiological evaluations, medical treatment was initiated. In addition to long-term antibiotic therapy, pentoxifylline treatment was administered to facilitate sequestration of the necrotic bone area, followed by surgical intervention.

Conclusion: There are various surgical and non-surgical approaches to the treatment of MRONJ. This case series demonstrates that surgical intervention following medical management can achieve favorable outcomes. Our study suggests that this treatment protocol may be an effective option in the management of MRONJ.

Key words: Antiresorptive drugs, MRONJ, Osteonecrosis

1. Introduction

Osteonecrosis of the jaw is a rare and persistent pathology that develops as a result of impaired blood supply to the maxilla and mandible, leading to bone necrosis and progressive bone destruction. Medication-related osteonecrosis of the jaw (MRONJ) is a relatively rare but potentially serious complication. MRONJ is defined as exposed bone or bone that can be probed through an intraoral or extraoral fistula in the maxillofacial region, which does not heal within 8 weeks and occurs in patients who have received antiresorptive or antiangiogenic drugs without a history of head and neck radiation. (1-2)
The clinical presentation of MRONJ includes necrotic, greyish-yellow, irregularly exposed bone surfaces, spontaneous or provoked pain, infection, purulent discharge, pathological fractures in the mandible, oroantral fistulas in the maxilla, erythema, sequestrum formation and halitosis. Radiographic examination may reveal areas of bone destruction, necrotic bone, dense trabecular bone and irregular radiolucent areas, as well as non-healing extraction sockets. While panoramic radiographs may be insufficient for detailed evaluation, CBCT imaging provides enhanced diagnostic capabilities.(3-4) Pathogenesis of MRONJ

is considered multifactorial, involving prolonged suppression of bone remodeling, infection, localized trauma and potentially impaired vascular perfusion. (5)

2. Case Report

An 86-year-old male patient presented to our clinic with severe pain and purulent discharge from the extraction site following tooth extraction. His medical history revealed a diagnosis of metastatic prostate cancer and the use of bisphosphonates and denosumab. Intraoral examination revealed exposed irregular bone surfaces and purulent discharge at the extraction site. Panoramic radiography showed non-healing extraction sockets.

Our second case involves a 40-year-old male patient presented with severe pain, purulent discharge and halitosis following tooth extraction, similar to the first case. His medical history included a diagnosis of multiple myeloma with a history of bisphosphonate use due to bone lesions, along with heavy smoking. Intraoral examination revealed exposed necrotic bone areas in the anterior maxilla. Cone-beam computed tomography (CBCT) revealed lytic bone lesions and irregular trabecular areas in the maxilla.

Our third case involves a 71-year-old female patient presented with severe pain in the anterior mandible. Her medical history included 15 years of bisphosphonate use due to osteoporosis and long-term use of removable dentures due to complete edentulism. Intraoral examination revealed an exposed greyish-yellow bone area in the premolar region of the mandible, with the presence of purulent discharge upon palpation. CBCT imaging showed dense trabecular bone areas and irregular radiolucent regions in the affected area.

In all three cases, the diagnosis of medication-related osteonecrosis of the jaw (MRONJ) was established based on intraoral and radiological findings along with the patients' history. As the initial treatment, medical therapy was initiated to control the infection. Following long-term antibiotic therapy, sequestration of the necrotic bone was achieved and the sequestrated bone areas were subsequently excised surgically.

3. Discussion

The most significant risk factors for MRONJ include the long term use of bisphosphonates, denosumab and other antiresorptive agents. The widespread use of these medications in the treatment of malignancy-associated bone metastases, multiple myeloma and osteoporosis has contributed to the increased incidence of MRONJ. Dental examination prior to the use of antiresorptive medications and the elimination of focal infection sites can reduce the risk of MRONJ development in the future. (5-6)

In cases with MRONJ development, decisions regarding treatment options should be patient specific. The risk-benefit ratio, the impact on quality of life, the patient's ability to manage wound care to prevent infection and disease progression, the morbidity associated with major surgical procedures and the potential consequences for oral function or the need for dental rehabilitation following marginal or segmental resection, should all be thoroughly evaluated. After surgical interventions, long-term follow-up and monitoring are essential to ensure successful healing and to identify any potential recurrence or complications. (3-4)

4. Conclusion

There are numerous treatment options, both surgical and non-surgical, in the treatment of MRONJ. Current literature has not reached a consensus on a single treatment approach. Further research is necessary to establish more standardized treatment protocols for MRONJ and to deepen our understanding of its pathogenesis. Detailed systemic anamnesis and radiological evaluation are crucial in treatment planning. In this case report, the aim is to evaluate medical treatment followed by surgical intervention as a less invasive option that can yield successful outcomes. (3-4)

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6. Figures

Figure 1: The sequestrated bone area identified on CBCT imaging. (Case 1)

Figure 2: Necrotic, irregularly exposed bone surfaces. (Case 1)

Figure 3: Necrotic, irregularly exposed bone surfaces. (Case 2)

Figure 4: Surgically excised sequestrated bone. (Case 2)

Figure 5: Dense trabecular and irregular radiolucent areas identified on CBCT imaging. (Case 3)

Figure 6: Demarcation line and radiopaque sequestrated bone area. (Case 3)

[OP-026]

CODE BLUE AWARENESS IN DENTAL STUDENTS: EVOLVING AWARENESS IN THE CLINIC

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Abstract

Objective: This study aims to assess the knowledge levels of dentistry students regarding Code Blue and evaluate their competence in making appropriate decisions when Code Blue activation is necessary. Additionally, the study seeks to identify differences in knowledge levels before and after clinical training, and to determine necessary adjustments in educational programs based on the collected data.

Methods: During the 2023-2024 academic year, a 10-question survey about Code Blue was administered to 3rd and 5th-year students at the Akdeniz University Faculty of Dentistry. After obtaining the necessary approvals, the survey was distributed in both electronic and paper formats, and the collected data were analyzed digitally.

Results: Among the 104 students who participated in the study, 75% were 3rd-year students, and 25% were 5th-year students. A total of 59.6% of the students were familiar with Code Blue. The most recognized code was the White Code (65.4%), while the least recognized was the Gray Code (3.8%). Only 30.8% of the students knew the correct phone number for Code Blue activation. All 5th-year students were familiar with Code Blue, whereas this rate was 63.4% among 3rd-year students. While all 5th-year students correctly identified the indications for Code Blue activation, this accuracy was 45.6% among 3rd-year students.

Conclusions: The findings indicate that clinical training positively impacts students' knowledge and competence regarding Code Blue. However, the overall knowledge level remains limited, highlighting the need for more extensive studies to enhance the generalizability of these results.

Keywords: Emergency Codes, Code Blue, Basic Life Support

1. Introduction

The "Code Blue" system is an emergency response mechanism designed to ensure rapid intervention in critical medical situations by reaching patients, their relatives, and hospital staff as quickly as possible (1). This system stands out as the only universally recognized color code for the same emergency worldwide. The "Code Blue Team" consists of trained doctors and nurses specialized in cardiopulmonary resuscitation (CPR). The implementation of Code Blue was first introduced in the United States (2). In our country, it became mandatory in hospitals with the publication of the "Patient and Employee Safety Regulation" in 2011 (3).

Cardiac arrest is common in healthcare settings, and delays in intervention are associated with high mortality rates and poor neurological outcomes (4, 5). Therefore, "Code Blue teams" have been established in our country to reduce preventable in-hospital mortality rates. Although Code Blue training is provided in healthcare institutions, Code Blue activations are often triggered in unnecessary situations. This study was planned to measure the level of knowledge about Code Blue, one of the primary factors influencing such unnecessary activations.

2. Objective

The primary objective of this study is to assess the knowledge level of dentistry students regarding Code Blue and evaluate their readiness to make appropriate decisions in activating Code Blue when necessary. The study also aims to determine if there are differences in this knowledge and decision-making readiness before and after clinical training. By analyzing the collected data, the study seeks to identify necessary adjustments in the students' education. Additionally, the study aims to raise awareness among dentistry

students about the importance of critical situations like Code Blue and to promote more effective implementation of emergency protocols.

3. Method

A multiple-choice questionnaire consisting of 10 questions about Code Blue was prepared and distributed to 3rd and 5th-year dentistry students in both electronic and paper formats. The data collected was then digitized and analyzed.

4. Results

A total of 104 students participated in the study, with 75% being 3rd-year students and 25% being 5th-year students. None of the students had previously initiated a Code Blue activation. While 59.6% of the students were aware of Code Blue, the most well-known code was White Code, recognized by 65.4% of the participants, followed by Red Code at 55.8%. The least known code was Gray Code, known by only 3.8% of the students. Additionally, 21.2% of the students were not familiar with any emergency code.

19.2% of the students had never heard of the term Code Blue before. While 30.8% of the students stated that they did not know in which situations Code Blue should be activated, 65.4% correctly identified the indication. Regarding the location where Code Blue is most frequently activated, 82.7% of the students predicted it would be in the Oral, Dental, and Maxillofacial Surgery Department, followed by the Pediatric Dentistry Department at 11.5%.

Only 30.8% of the students knew the phone number necessary to activate Code Blue. Furthermore, 48.1% of the students believed that hypotension/hypertension, 59.6% believed that altered consciousness, 51.9% believed that vasovagal syncope, 57.7% believed that epileptic seizures, 17.3% believed that falls, and 5.8% believed that agitation were valid indications for activating Code Blue. However, only 19.2% recognized that all these indications were incorrect.

When asked about the expected response time of the Code Blue team, 51.9% of the students selected under 3 minutes, 17.3% believed it should be under 1 minute, and 26.9% thought it should be under 5 minutes.

While all 5th-year students knew what Code Blue was, only 63.4% of 3rd-year students were familiar with it. In terms of correctly identifying Code Blue activation indications, all 5th-year students responded correctly, compared to 45.6% of 3rd-year students.

5. Discussion

The fact that the most recognized emergency code among the student participants in this study was Code White is a concerning indicator of the increasing prevalence of violence in our country. While the majority of students have heard of and are aware of the Code Blue, their level of knowledge regarding the appropriate indications for code blue activation is relatively limited.

The most significant limitation of this study, in which preliminary results are presented, is that the number of students included is not yet substantial enough to yield conclusive findings.

6. Conclusion

The results of this study indicate that the knowledge and competency levels of dental students with regard to Code Blue vary in accordance with their level of clinical training. It was observed that fifth-year students, who have undergone clinical training, are generally more aware of the definition and indications of Code Blue compared to third-year students. However, the overall level of knowledge about Code Blue among students remains limited. Multi-center studies with a larger sample size would enhance the generalizability of these findings and contribute to the development of dental education on this critical subject.

7. Keywords

Emergency Codes, Code Blue, Basic Life Support

8. References

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[OP-028]

OSTEOMYELITIS OF JAWBONES – A CASE SERIES AND LİTERATURE REVİEW

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Abstract
Objective: Osteomyelitis is primarily an inflammatory condition of bone and bone marrow, characterized by local bone destruction following infectious processes, leading to necrosis and subsequent new bone formation. This article discusses the diagnosis and treatment management of cases consistent with osteomyelitis.

Materials and Methods: The study involved a retrospective review and a case series of three patients who presented with complaints to the Department of Oral and Maxillofacial Surgery at Istanbul University Faculty of Dentistry, consistent with clinical symptoms of jaw osteomyelitis and supported by radiographic and/or microbiological evidence.

Results: Histological examination of tissue samples taken from the cases revealed findings consistent with secondary chronic osteomyelitis. The mandibular corpus region was predominantly affected. The dominant etiological factor was found to be of dental origin. The patients underwent procedures such as sequestrectomy, decortication and hemi-mandibulectomy, accompanied by initial intravenous and subsequent oral high-dose antibiotic therapy. Following the treatments, it was reported that complaints like restricted mouth opening, pain, swelling, sensitivity on palpation and numbness had completely resolved.

Conclusion: Despite significant medical and surgical advancements in the treatment of osteomyelitis, managing this disease remains extremely challenging. Optimal management requires a multidisciplinary approach. Treatment protocols for osteomyelitis include surgical and/or non-surgical approaches. Recent advancements in treatment involve the use of biomaterials surgically placed in the infected region. Timely detection of osteomyelitis, identification of the causative etiological factors, appropriate antibiotic selection, the execution of precise and effective surgical procedures is critical in preventing severe damage to bones, teeth and surrounding anatomical structures.

Keywords: Jawbones**,** osteomyelitis, treatment

Introduction: Osteomyelitis derives from the Greek words "osteon" (bone) and "myelos" (marrow), and it describes an infection of the medullary portion of the bone, including the bone marrow. In the literature, osteomyelitis is referred to as an inflammation of the entire bone, encompassing the cortex and periosteum. The infection typically begins in the medullary cavity and Haversian canals, spreading to the periosteum of the affected bone. The accumulation of pus and edema under the periosteum and in the medullary cavity disrupts the bone's circulation, leading to ischemia. Following ischemia, necrosis and sequestrum formation occur in the infected bone. The prevalence, clinical progression, and treatment of osteomyelitis of the jaws have undergone significant changes over the last half-century. This transformation is primarily attributed to the widespread use of antibiotics, particularly penicillin-based ones, in treating various infections. In addition to antibiotics, advances in medicine and dentistry, increased access to appropriate treatment due to greater knowledge about the disease, and the use of modern diagnostic imaging techniques that enable early and localized detection of bone infections have also contributed to this change. Although osteomyelitis is no longer as common as it once was, it remains a persistent and challenging disease to treat, with the potential to cause severe aesthetic and functional sequelae. This study presents the diagnostic and treatment methods for three cases consistent with secondary chronic osteomyelitis.

Materials and Methods: This study consists of a retrospective review and case series analysis involving three patients who presented with clinical complaints indicative of jaw osteomyelitis to the Department of Oral and Maxillofacial Surgery at Istanbul University Faculty of Dentistry. In each case, the characteristic signs and symptoms of osteomyelitis were observed and were further substantiated by radiographic imaging, microbiological culture results, and histopathological assessments.

Case 1

A 16-year-old female patient presented to our clinic with complaints of a firm swelling in the right mandibular angle region and severe pain in the same area persisting for one month. She reported no systemic health issues. Intraoral examination revealed deep caries in the lower right second and first molar teeth, extreme tenderness upon percussion, shallowing of the vestibular depth, hyperemia in the vestibular mucosa, purulent discharge into the oral cavity, and restricted mouth opening. Panoramic radiography showed trabecular loss in the right mandibular corpus, irregular radiolucent areas (moth-eaten appearance) extending from the distal of the second molar to the apex of the second premolar, widening of the periodontal space around the second and first molars, and an impacted third molar. It was noted that the patient had sensory loss in the right lower lip. Laboratory tests revealed an elevated CRP level of 25.2, and her body temperature was measured at 38.5°C. CT scans in axial and coronal sections demonstrated osteolytic areas in the medullary bone, with perforations in the cortical bone on both the vestibular and lingual sides, along with reactive periosteal formation. Based on clinical and radiographic evaluations, the patient was diagnosed with secondary chronic osteomyelitis. According to the Cierny-Mader classification, the case was categorized as Stage 4A. Treatment was planned to include decortication, antibiotic therapy, and hyperbaric oxygen therapy. Under local anesthesia, a full-thickness flap was elevated in the affected region, and the impacted third molar, second molar, and first molar teeth were extracted sequentially. Infected bone from the vestibular cortex was completely removed, exposing the medullary cavity. The medullary bone was observed to be easily curettable. The neurovascular bundle was preserved while the medullary bone was completely removed up to the lingual cortex, confirming the integrity of the lingual bone and the inferior border of the mandible. Samples were sent for pathological and microbiological culture analysis. The surgical site was irrigated with Rifocin ampoule and primarily closed. The patient was initiated on the highest doses of clindamycin and metronidazole antibiotics intramuscularly, which were continued for six weeks. A root canal treatment was performed on the second premolar tooth. After the pathology results confirmed the diagnosis of osteomyelitis, hyperbaric oxygen therapy was started and continued for 60 sessions. Within two weeks, the patient's complaints of pain, swelling, tenderness upon palpation, and restricted mouth opening completely resolved. The CRP level decreased to 1.5 after two weeks. Sensory function in the right lower lip returned to normal. The patient's two-year follow-up has been uneventful. Panoramic radiographs and CT scans obtained one year later from the same region showed normalization of trabeculation, complete resolution of osteolytic areas, and restoration of normal cortical bone structure on both the lingual and buccal sides.

Case 2

A 65-year-old female patient presented to our clinic with complaints of a firm swelling persisting for one year following a tooth extraction on the left mandibular side, tenderness on palpation, restricted mouth opening, malnutrition, and sensory loss around the left lower lip. The patient had a history of controlled hypertension and diabetes; however, her blood glucose levels had been elevated for the past year. It was also noted that she had been using various intramuscular and oral antibiotics prescribed by dentists during this period. Blood tests revealed a CRP level of 63. A panoramic radiograph showed irregular osteolytic areas resembling a moth-eaten appearance, extending from the mental foramen region along the ramus to the coronoid process and condyle on the left side of the mandible. A biopsy was performed from the affected region, and the histopathological report indicated chronic bone inflammation. The patient was diagnosed with osteomyelitis and classified as Stage 4B according to the Cierny-Mader classification. Hemimandibulectomy was planned as the treatment approach. Under general anesthesia with nasal intubation, the surgical procedure was initiated using the Risdon approach. Skin and subcutaneous tissues were dissected bluntly, exposing the submandibular gland, and the facial artery and vein were ligated. Dissection proceeded upwards to reach the inferior border of the mandible. The periosteum was carefully elevated to expose the infected area. A full-thickness cut was made mesial to the mental foramen, and the periosteum was elevated over the coronoid process and condylar region. The affected portion of the mandible was excised. Immediate reconstruction was achieved using a reconstruction plate and a joint prosthesis. Two months postoperatively, the patient's CRP level had decreased to 4.2. Her mouth opening

returned to normal, and the pain and swelling on the left side had completely resolved. The patient has been followed up for two years without any complications.

Case 3

A 39-year-old male patient without any history of systemic diseases or prior medical treatment presented to our clinic with a complaint of a persistent infection in the left mandibular region that did not heal despite long-term antibiotic therapy. Upon obtaining a detailed history, it was learned that a tooth extraction had been performed in this area approximately one year prior. Computed tomography (CT) scans revealed a well-defined radiolucency in the affected region along with a sequestrum line. A three-phase treatment plan comprising antimicrobial therapy, surgical intervention, and hyperbaric oxygen therapy (HBOT) was devised for the patient. Initially, intravenous clindamycin was administered for two weeks. This was followed by the surgical phase, during which sequestrectomy and decortication were performed. Tissue samples collected during surgery were sent for histological examination, and the results confirmed a diagnosis of chronic active osteomyelitis. Postoperatively, the patient was prescribed oral amoxicillin-clavulanic acid during the first week. Subsequently, the patient underwent 40 sessions of HBOT. Intraoral and extraoral healing was observed during the first postoperative week. Following this phase, the patient was referred for HBOT. The patient attended routine follow-ups at regular intervals, and by the 12th week of treatment, complete resolution of pain and swelling was reported. A CT scan obtained at this point showed that the sequestrum observed in preoperative images had been replaced by healing tissue.

Results: Histological examination of tissue samples obtained from the cases confirmed findings consistent with secondary chronic osteomyelitis. The mandibular corpus region was identified as the most commonly affected anatomical area. Analysis of the underlying causes revealed that the primary etiological factor was of dental origin, with infections originating from untreated or inadequately managed dental conditions such as advanced caries, periodontitis, or complications following tooth extractions. The treatment strategies for the patients involved a combination of surgical and pharmacological interventions tailored to the severity of the disease and the extent of bone involvement. Surgical procedures included sequestrectomy to remove necrotic bone fragments, decortication to enhance vascularization and stimulate new bone formation, and in more severe cases, hemimandibulectomy to excise the extensively infected mandibular segments. These surgical approaches were meticulously performed to ensure complete debridement of the affected areas while preserving as much healthy bone and surrounding structures as possible. The surgical interventions were complemented by a robust antibiotic therapy regimen. Initially, high-dose intravenous antibiotics, including clindamycin and metronidazole, were administered to target both aerobic and anaerobic bacteria commonly implicated in osteomyelitis. Following stabilization and clinical improvement, the antibiotic regimen transitioned to oral formulations, such as amoxicillin-clavulanic acid, to sustain therapeutic levels and ensure the eradication of infection over an extended period. The duration of antibiotic therapy ranged from several weeks to months, depending on the patient's response to treatment. Additionally, patients underwent hyperbaric oxygen therapy (HBOT) as an adjunctive treatment, particularly in chronic and refractory cases. HBOT was utilized to enhance oxygenation of the affected tissues, promote angiogenesis, and support immune function in combating the infection. Patients typically completed 40 to 60 sessions of HBOT, which contributed to improved wound healing and bone regeneration. Following the comprehensive treatment protocols, all patients demonstrated significant clinical improvement. Complaints such as restricted mouth opening, severe pain, swelling, sensitivity upon palpation, and numbness in the affected mandibular regions were entirely resolved. Follow-up radiographic and clinical evaluations confirmed the restoration of normal bone architecture, with no recurrence of infection. The long-term follow-up results, extending over two years, indicated that the patients remained free of symptoms and exhibited stable recovery without complications.

Discussion: Despite significant advancements in medical and surgical techniques, the management of osteomyelitis continues to pose a substantial challenge for healthcare professionals. This difficulty stems from the complex nature of the disease, characterized by chronic infection, progressive bone destruction, and a tendency for recurrence. Successful treatment requires a multidisciplinary approach, involving close collaboration between oral and maxillofacial surgeons, infectious disease specialists, radiologists, and rehabilitation experts. Treatment protocols for osteomyelitis typically include both surgical and non-surgical strategies, tailored to the stage and severity of the condition, as well as the patient's overall health. Surgical interventions remain a cornerstone of management, aiming to remove necrotic tissue, control infection, and restore normal anatomical structure and function. Procedures such as

sequestrectomy (removal of dead bone fragments), decortication (removal of the outer cortical bone to enhance vascularization), and more extensive surgeries like hemimandibulectomy may be necessary in advanced cases. These surgical approaches are often augmented by reconstruction techniques, such as the use of autogenous bone grafts, reconstruction plates, or prosthetic devices, to restore functionality and aesthetics. Non-surgical approaches focus on controlling the infection and promoting healing through pharmacological and supportive therapies. Timely and targeted antibiotic therapy is critical, with the choice of antibiotics guided by microbiological culture and sensitivity testing. High-dose intravenous antibiotics, such as clindamycin or metronidazole, are often administered initially to ensure rapid bacterial eradication. This is followed by an extended course of oral antibiotics, such as amoxicillin-clavulanic acid, to maintain therapeutic levels and prevent recurrence. Recent advancements in osteomyelitis treatment have introduced the use of biomaterials, including antibiotic-impregnated beads, bone substitutes, and growth factor-enriched scaffolds, surgically placed in the infected region. These biomaterials not only provide local delivery of antibiotics to control infection but also support bone regeneration and healing. Additionally, hyperbaric oxygen therapy (HBOT) has emerged as a valuable adjunctive treatment, particularly in chronic or refractory cases. HBOT enhances oxygenation of the affected tissues, promotes neovascularization, and strengthens the host's immune response, thereby accelerating recovery and reducing the risk of complications. Timely detection of osteomyelitis is paramount, as delayed diagnosis can result in extensive bone destruction, loss of teeth, and damage to surrounding anatomical structures, including nerves and soft tissues. Early recognition involves careful clinical evaluation of symptoms such as pain, swelling, restricted movement, and signs of systemic infection. Advanced imaging techniques, including computed tomography (CT) and magnetic resonance imaging (MRI), play a crucial role in accurately assessing the extent of bone involvement and guiding surgical planning. Identifying the underlying etiological factors, such as dental infections, trauma, systemic conditions like diabetes, or immunosuppressive states, is equally important in preventing recurrence. Comprehensive patient management includes addressing these predisposing factors, optimizing systemic health, and ensuring adherence to long-term follow-up protocols. Ultimately, the successful management of osteomyelitis requires a holistic approach that combines precision in surgical interventions, the judicious use of antibiotics, innovative biomaterial applications, and effective patient monitoring. Advances in technology and biomaterials offer promising avenues for improving outcomes, but timely diagnosis, individualized treatment planning, and rigorous follow-up remain the cornerstones of effective osteomyelitis care.

Conclusion: This case series report underscores the importance of early diagnosis and a multidisciplinary approach in managing osteomyelitis of the jaw. The study further highlights the critical role of advanced imaging, targeted antimicrobial therapy, and timely surgical intervention in achieving favorable outcomes. Additionally, it emphasizes the need for long-term follow-up to monitor healing and prevent recurrence, particularly in cases involving significant bone loss or reconstruction.

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[OP-034]

QUAD ZYGOMA IMPLANT PLACEMENT İN A PATİENT USİNG DENOSUMAB AND LİTERATURE REVİEW

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Abstract

Objective: Zygomatic implants are often used in cases of severe maxillary resorption. Five techniques are commonly used: the original Branemark method, sinus slot technique, extra-maxillary sinus technique, minimal invasive surgery with surgical guides, and computer-assisted navigation.
Denosumab, a monoclonal antibody, targets the RANK/RANKL system to reduce bone resorption by inhibiting osteoclast formation and function. A significant complication in oral surgery with such treatments is jaw osteonecrosis (MRONJ).
Case Report: Our patient came to our clinic for implant treatment due to complete tooth loss. Clinical and radiographic exams showed severe maxillary bone resorption, and it was noted the patient had used a single dose of Prolia one year ago.
Quad zygomatic implants and dental implants were placed. The patient underwent regular follow-ups and was called back for prosthetic work. The prosthetics have been completed, and follow-ups continue.
Conclusion: In patients on anti-resorptive therapy, bone augmentation should be avoided if possible, and perioperative antimicrobial prophylaxis is strongly recommended. The risk of complications after dental implant surgery increases with higher doses, combined treatments (e.g., corticosteroids), and prolonged use.
Previous studies indicate that denosumab users might face MRONJ risks with tooth extraction, poor oral hygiene, or removable prostheses. Maintaining periodontal health in the first three years after treatment is crucial.
Unlike bisphosphonates, denosumab does not bind to bone, and bone effects normalize within six months after discontinuation.
In summary, patients with a history of bisphosphonate use are at risk of MRONJ, while the risk for those treated with denosumab for osteoporosis is minimal.
Keywords: Denosumab, MRONJ, Zygomatic Implants

1. Introduction

The successful placement and longevity of dental implants largely depend on osseointegration during wound healing. Osseointegration is a dynamic process that requires the normal functioning of natural biological activities during bone remodeling. Therefore, drugs that interact with bone remodeling and angiogenesis can jeopardize osseointegration and lead to early implant loss. Zygomatic implants are commonly used for severe maxillary resorption. Distraction osteogenesis is considered a more reliable, quicker, and minimally invasive procedure compared to bone augmentation. The literature describes five surgical approaches: the original Branemark technique, the sinus slot technique, the extra-maxillary sinus technique, a minimally invasive technique with special surgical guides, and computer-assisted surgical navigation. Zygomatic implant insertion torque should be at least 35 Ncm.. Two zygomatic implants are insufficient for a fixed prosthesis; usually, four implants are placed, corresponding to the second premolar and canine regions.
Anti-resorptive medications are typically prescribed to reduce fracture risk associated with osteoporosis and for patients with skeletal involvement from advanced malignancies like breast, lung, prostate cancer, and multiple myeloma. These drugs affect bone homeostasis by inhibiting osteoclast differentiation and function. Four main classes of anti-resorptive drugs are currently in use: bisphosphonates, selective estrogen receptor modulators, calcitonin, and monoclonal antibodies like denosumab. Denosumab is a

monoclonal antibody targeting the RANK/RANKL system, reducing bone resorption by inhibiting osteoclast formation, function, and survival. A potential complication in oral surgery with these drugs is jaw osteonecrosis (MRONJ), which can also hinder the osseointegration process.
The impact of anti-resorptive drugs on the longevity and survival of dental implants is of particular interest to dental professionals. Studies on the effects of these drugs on implants are insufficient and controversial. This case report presents a patient using denosumab who underwent zygomatic and dental implant placement, and reviews current approaches to dental implant procedures in patients using anti-resorptive drugs.

2. Case Report

Our patient sought implant treatment at İnönü University Faculty of Dentistry due to total edentulism. Clinical, panoramic, and cone beam computed tomography examinations revealed severe maxillary bone resorption(Figure 1). The 66-year-old patient had used a single dose of Prolia a year ago due to osteoporosis.
After evaluation, it was planned to place quad zygomatic implants in the upper jaw using the original Branemark technique and two dental implants in the lower jaw. Under general anesthesia, the quad zygomatic and dental implants were placed(Figure 2, Figure 3). The patient was scheduled for regular follow-ups and was called back after six months for prosthetic construction (Figure 4). To enhance the success of the dental prostheses, vestibuloplasty was performed on the anterior lower jaw and the left upper jaw area. After healing, the prostheses were completed. The patient's follow-ups are ongoing.

3. Discussion

With the increasing elderly population in many countries, the prevalence of tooth loss and demand for implant-supported rehabilitation is rising. Additionally, the population with bone metabolic diseases is growing, leading to increased use of medications altering bone metabolism for conditions such as osteoporosis, rheumatic diseases, and bone malignancies. This case report demonstrates the success of quad zygomatic and dental implants and subsequent prostheses in a patient using denosumab.
Studies have shown that a history of bisphosphonate treatment for osteoporosis does not increase the risk of implant failure regarding osseointegration. However, all patients with a history of bisphosphonate therapy, whether oral or intravenous, are at risk for jaw osteonecrosis. Conversely, the risk of MRONJ in patients treated with denosumab for osteoporosis is found to be negligible. Nevertheless, dental implants are contraindicated in patients receiving anti-resorptive therapy due to malignancies.
In patients undergoing anti-resorptive therapy, bone augmentation procedures should be avoided if possible, and perioperative antimicrobial prophylaxis is strongly recommended. The risk of complications after dental implant surgery is higher with higher doses, combined use (such as corticosteroids), and prolonged duration. There is limited evidence suggesting that discontinuation of these drugs might prevent MRONJ, and the discontinuation of anti-resorptive agents remains controversial.
Previous studies have reported that in patients using denosumab, conditions such as tooth extraction, poor oral hygiene, or removable prosthesis use are potential triggers for MRONJ. Fixed prostheses and maintaining oral hygiene reduce this risk. Additionally, peri-implantitis has been identified as a potential trigger for MRONJ. Regular monitoring and maintaining good periodontal health within the first three years of anti-resorptive therapy are crucial for implant success. We continue to monitor our patient regularly.
Bisphosphonates have a reported half-life of over 10 years due to their higher affinity for hydroxyapatite. Denosumab, as a RANK-L inhibitor, does not bind to bone, and its effects on bone revert to normal within six months after discontinuation. Another study reports that the half-life of denosumab is approximately 26 days after administration. In our case, the surgical procedure was performed one year after denosumab use.

4. Conclusion

Patients with a history of oral bisphosphonate treatment for osteoporosis or intravenous bisphosphonate treatment for malignancy are at risk for MRONJ. However, the risk for those treated with denosumab for osteoporosis is negligible.
Dental professionals should exercise caution when planning dental implant treatments for patients with a history of bisphosphonate or denosumab therapy, ensuring informed consent is included before implant placement.

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6. Figures

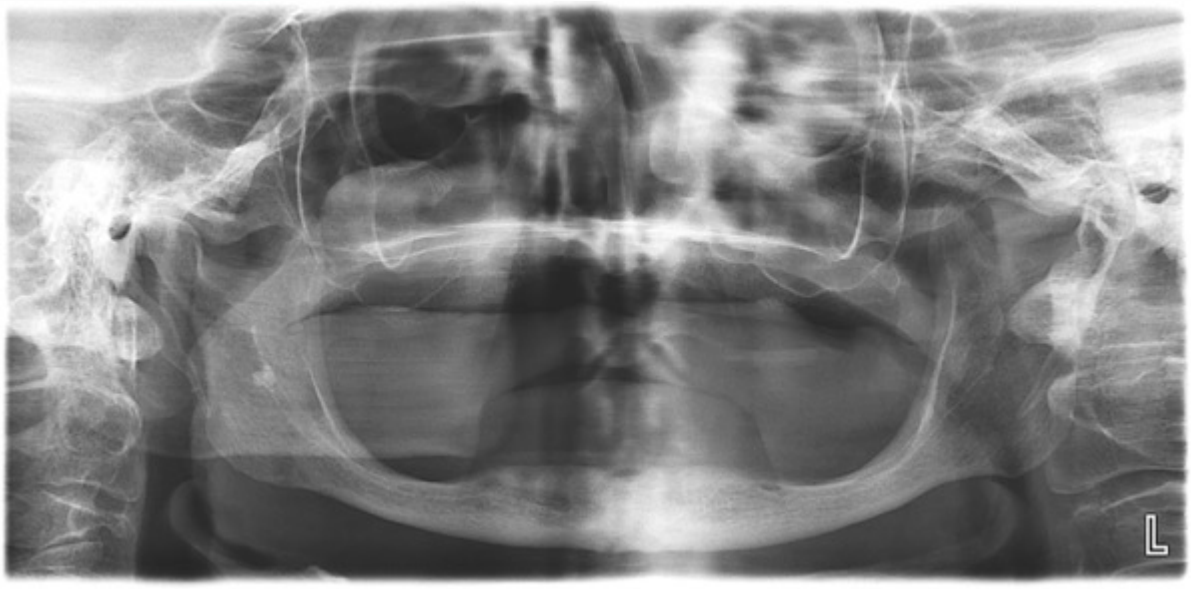

Figure 1: Preoperative panoramic image

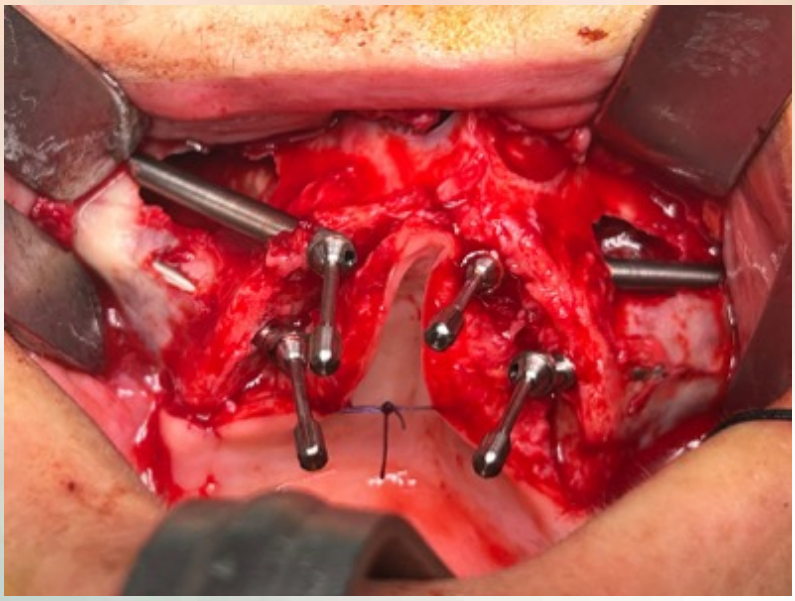

Figure 2: Intraoral view of quad zygomatic implants.

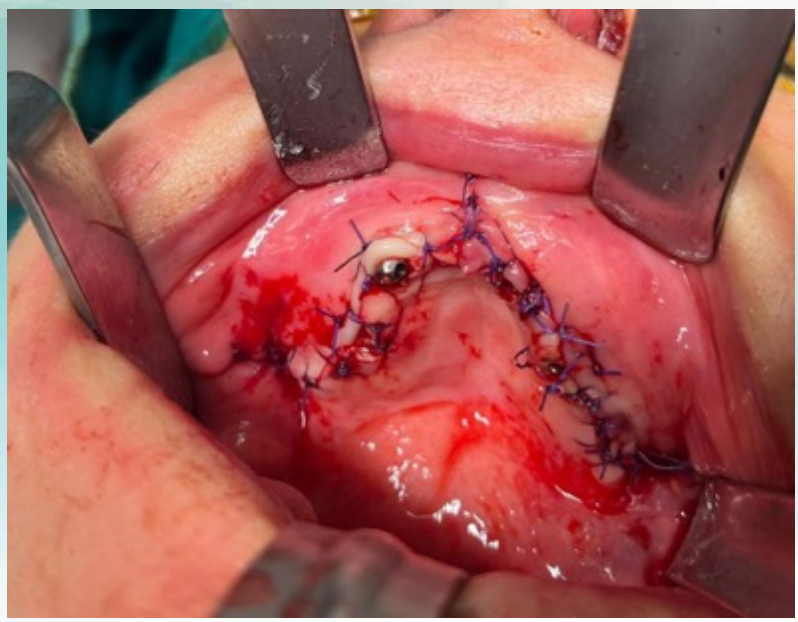

Figure 3: Closure of the area.

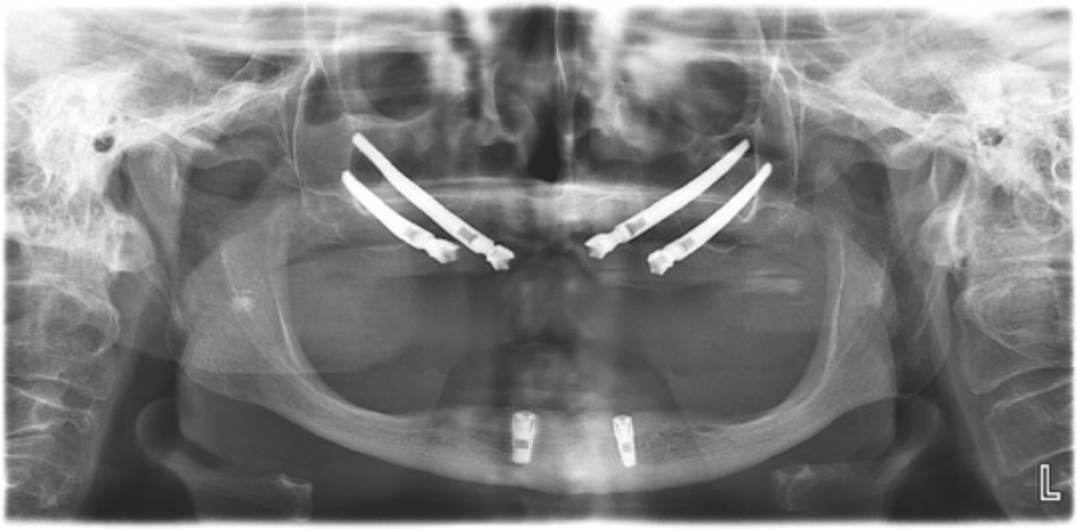

Figure 4: Postoperative panoramic image.

[OP-036]

TREATMENT OF ORAL LICHEN PLANUS WITH INTRALESIONAL CORTICOSTEROID INJECTION: A CASE REPORT AND LITERATURE REVIEW

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Abstract

Objective: Oral lichen planus is an autoimmune disease marked by pain and burning, especially in atrophic and erosive forms. This report describes in detail the positive results of intralesional steroid treatment in persistent lichen planus and introduces a new method for gingival involvement.

Case Report: A patient with pain in buccal mucosa and gums, previously diagnosed with lichen planus in 2018 after a biopsy, presented to our clinic. At the same center, the patient was prescribed Dermovate %0.05 cream for 15 days and was advised to use Elidel %1 cream as long as she had complaints. The patient stated that after applying this prescription, his symptoms decreased for a short time, but the same complaints continued to increase after 2 months. Upon presenting to our clinic, the patient received two intralesional injections of triamcinolone hexacetonide into the buccal mucosa, administered one month apart. Buccal symptoms resolved, leaving only gingival pain. Triamcinolone hexacetonide impregnated sutures were placed in the gingival sulcus. After two biweekly applications, the patient reported that his gum complaints were resolved.

Conclusion: Due to its less systemic effects, intralesional steroid application is one of the treatment alternatives that should be considered primarily in the treatment of persistent oral lichen planus. For gingival complaints, it has been observed that corticosteroid application placed in the gingival sulcus with a carrier as a non-invasive method gives successful results in the treatment of symptomatic gingival lichen planus.

Key Words: corticosteroid, injection, lichen planus

1. Introduction

Oral lichen planus (OLP) is a chronic, potentially malignant, mucocutaneous, inflammatory and immunologic disease, which is frequently seen in the age range of 30-60 years and 1.5-2 times more common in women than in men (1,2). It frequently affects the buccal mucosa, tongue and gingiva in the oral cavity. Lesions may be symmetrical and bilateral or unilateral in these areas (3).

OLP can have different clinical presentations ranging from keratotic manifestations (white reticular, papular and/or plaque-like lesions) to non-keratotic lesions (atrophic, erythematous and/or erosive, ulcerative or bullous lesions). Keratotic OLP is usually asymptomatic, while non-keratotic OLP is associated with oral discomfort, burning sensation and severe pain. Painful lesions can affect eating, swallowing and speech, leading to impaired quality of life in OLP patients (4).

Although the exact etiology of OLP is unknown, it is suggested that the condition is caused by a cellular immune response triggered by an inflammatory infiltrate of T lymphocytes (5). The disease pathogenesis involves cytotoxic CD8 T lymphocytes migrating into the epithelium, inducing apoptosis of basal keratinocytes (6).

In general, the treatment of OLP is decided based on disease activity and severity. Treatment options include corticosteroids in topical or systemic formulations, calcineurin inhibitors, other immunosuppressive and biological agents (7). Various topical corticosteroids such as triamcinolone hexacetonide (TH), betamethasone sodium phosphate, dexamethasone, clobetasol and fluocinonide are preferred as initial treatment due to their anti-inflammatory effects. In topical application, a corticosteroid

rinse or paste is usually applied, and when an erosive spot does not heal well or recurs continuously, intralesional injection is considered (8). Patients with localized but severe and painful ulcerations require urgent intervention to relieve symptoms (7).

In our study, we aim to describe in detail the positive results of intralesional steroid treatment in a persistent OLP patient who applied to our clinic with complaints of pain and burning in the mouth and who had not previously benefited from topical steroid treatment. In addition, a new method we found for gingival involvement will be introduced.

2. Case Report

In 2018, a patient who presented to a dermatology clinic with complaints of burning in the gum and buccal areas inside the mouth and increased pain when consuming bitter and spicy foods was prescribed Dermovate 0.05% cream for 15 days, but this treatment did not completely relieve the patient's symptoms. The patient, whose complaints persisted afterwards, was prescribed Elidel cream in the same clinic and was advised to apply this cream on his gums, cheek and arm. With this treatment, a decrease in the patient's symptoms was observed. The patient continued to attend regular dermatology controls at the same clinic between 2018 and 2021.

In January 2023, during a stressful period, the patient developed itchy lesions on the inner surface of his inner arm, back and crown of his head, which dried up and fell off, leaving behind small spots at the same level as the surface. The patient was admitted to our clinic in March 2023 with complaints of severe pain and burning in the buccal region and gums inside the mouth (Fig 1). On March 20, 2023, TH 20 mg/mL was injected into the patient's lesion on the left buccal mucosa in our clinic and the patient's symptoms decreased. One month later, the same injection was given to the entire lichen lesion on the patient's left and right buccal mucosa.

On May 3, 2023, a follow-up examination showed that the patient's symptoms had largely subsided, but the patient continued to complain of burning gums (Fig 2). On this date, TH was applied to the patient's gingiva. For this application, a 4-0 silk suture was soaked in TH within a gode for 2 minutes to ensure adequate absorption of the drug (Fig 3). The treated suture was then placed in the gingival sulcus, similar to the placement of a retraction cord, and left in place for 10 minutes (Fig 4).

On October 3, 2023, a follow-up examination showed that the patient's gingival symptoms had almost completely resolved. The symptoms persisted only in the area between teeth 33-43, so the same treatment was repeated in this area. On October 17, 2023, the patient's all symptoms completely disappeared (Fig 5,6).

3. Discussion

Intralesional injection of TH is a useful treatment option for the treatment and pain management of OLP. TH treatment's effectiveness in OLP is mainly due to its local anti-inflammatory action and T cell suppression. (2,7).

Patients with localized but severe and painful ulcerations require urgent intervention to relieve symptoms. In such cases, systemic corticosteroids provide a rapid and effective response but are associated with higher toxicity and systemic side effects. In intralesional corticosteroid injections, the active agent is administered locally in high concentrations, is more potent and, due to its insolubility, can remain in tissues longer and maintain its activity. Furthermore, the possibility of systematic toxicity is very low with local administration (2,7).

In order to achieve better efficacy and avoid possible side effects, it is recommended that the treatment interval for intralesional injection be at least 2 weeks. In OLP treatment, the injection is made directly into the subepithelial connective tissue beneath the ulceration (2).

TH injection is particularly suitable for treating oral diseases like large or refractory ulcerations, including chronic discoid lupus erythematosus, traumatic mouth ulcers, and large aphthous ulcers. However, if microbial, fungal or viral infection is present, TH injection is not recommended (2,6). Periodontal inflammation as a source of local irritation is a factor exacerbating the gingival lesions of OLP. Practicing good oral hygiene and achieving optimal periodontal health contribute to successful management outcomes (6,8).

4. Conclusion

Intralesional injections of TH are an effective treatment option for OLP, especially for refractory lesions and painful ulcerations. However, it should be kept in mind that treatment should be tailored to each individual patient and long-term follow-up is required. Additionally practicing good oral hygiene and achieving optimal periodontal health contribute to successful management outcomes. Moreover, TH-impregnated sutures are also an effective method for the treatment of gingival OLP.

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6. Figures

Figure 1: Initial state of buccal mucosa

Figure 2: Initial state of gum

Figure 3: Triamcinolone hexacetonide impregnated silk suture

Figure 4: Gingival retraction with triamcinolone hexacetonide impregnated silk suture

Figure 5: Gingival status 5 month after gingival retraction with triamcinolone hexacetonide

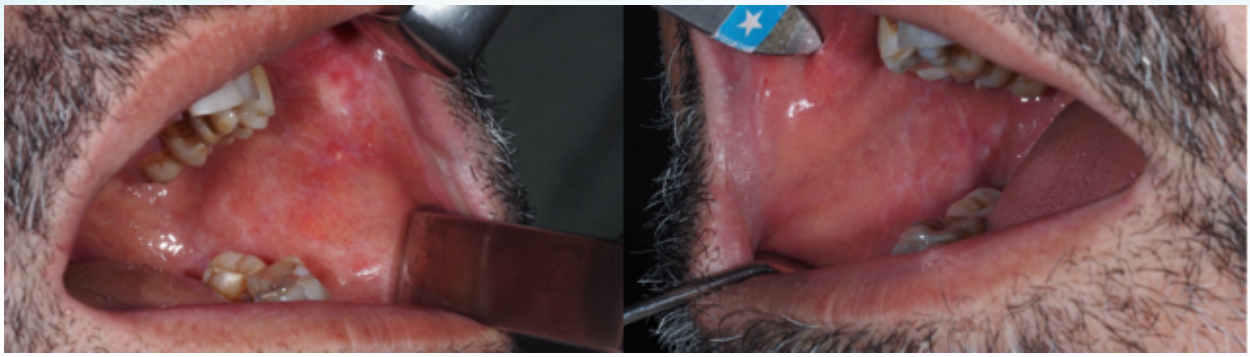

Figure 6: Status of the buccal mucosa 6 months after injection

[OP-045]

Oral Lıpoma Case And Revıew Of Lıterature

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Abstract

Objectives: Lipomas are benign tumors originating from mesenchymal tissue and composed of mature adipocytes. While they can be found in various parts of the body, they are less commonly observed in the oral cavity. Within the oral cavity, they are most frequently located in the buccal area, and less commonly on the tongue, floor of the mouth, buccal mucosa, and vestibular sulcus. Although the exact cause is not well understood, chronic trauma, infection, and hormonal changes may contribute to their development.

Case Report:A 64-year-old male patient presented with a complaint of a painless swelling in the lower anterior region. After obtaining the necessary radiographs and evaluating the teeth and other structures in the area, the vitality test of the adjacent tooth yielded a positive response. An aspiration biopsy also returned negative results. No resorption was observed in the bone tissue. Following these evaluations, a decision was made to proceed with a biopsy. The excisional biopsy was followed by histopathological examination, which confirmed the diagnosis of a lipoma.

Conclusion: Treatment should be considered for lipomas that reach large sizes or cause aesthetic or functional symptoms. The primary treatment is surgical excision. Recurrence is rare, but long-term follow-up is recommended.

Key words: biopsy, mandible, oral lipoma

1. İntroduction

Lipomas are benign tumors composed of mature adipocytes and can occur in any area where adipocytes are present. They account for approximately 15-20% of all benign tumors in the head and neck region and 4-5% of all benign tumors (1-2).

Oral lipomas are relatively rare, representing only 0.1-5% of all benign tumors within the oral cavity. Although lipomas can develop in any location within the oral cavity, they most commonly affect the major salivary glands, particularly the parotid gland. They are followed by the buccal mucosa, lips, tongue, palate, floor of the mouth, and gingiva (3).

Small lipomas in the oral cavity may be asymptomatic; however, larger tumors can cause discomfort, chewing difficulties, dysphagia, and dyspnea. Typically, there is no associated pain or tenderness. Lipomas generally exhibit well-defined borders, making surgical excision the recommended treatment (4).

While there is no significant difference in incidence between genders, the frequency of occurrence increases with age, particularly in individuals over 40 years old (5-6).

2. Case Report

A 64 -year- old male patient presented with complaints of increasing pain and occasional swelling in the vestibular sulcus adjacent to tooth number 42 in the anterior mandibular region, attributed to dietary habits.

Intraoral examination revealed a palpable, soft-textured mass. An aspiration biopsy yielded negative results. The adjacent tooth number 42 responded positively to vitality testing.Panoramic radiographs and CBCT images showed no evidence of bone resorption.

A biopsy was planned under local anesthesia. Following mental block anesthesia, a minimal incision was made in the vestibular region, and the pathological tissue was completely excised using blunt dissection. The specimen was sent to the laboratory for histopathological examination. The histopathological results confirmed the diagnosis of a lipoma, consistent with our preliminary diagnosis.

The patient is under continued follow-up.

3. Discussion

The term 'universal tumor' is used for lipomas due to their ability to occur anywhere in the body. The head and neck region is one of these areas, with lipomas in this region comprising 15-20% of all lipomas (7).

The exact etiology of lipomas is not well understood; however, trauma, infection, hormones, and genetic factors are suspected to play a role in their development (8). Oral lipomas can occur at any age but are more frequently observed in individuals over the age of 40, and they tend to exhibit slow growth (9).

The age distribution of patients with oral lipomas has been a focal point in various studies. In a 14-year retrospective study examining 95 lipomas and their histopathological variants, the mean age of the cases was reported as 58.8 years. This finding aligns with other literature indicating that oral lipomas are predominantly observed in the 4th to 6th decades of life (10).

Such age distribution suggests that these lesions are more frequently diagnosed in middle-aged individuals, highlighting a potential correlation between age and the development of lipomas.

Additionally, in a retrospective study conducted by Epivatianos et al., 13 cases of oral lipomas were analyzed, revealing a mean patient age of 60.2 years. This consistency across studies further supports the notion that oral lipomas predominantly affect older adults, possibly due to age-related factors influencing adipose tissue dynamics (11).

These findings suggest that clinicians should remain vigilant for the presence of lipomas in these age groups, as timely diagnosis and management can significantly impact patient outcomes.

Reports regarding the relationship between lipomas and gender are varied. Some studies have reported that the incidence of oral lipomas is similar in both men and women, while others have suggested that they are more common in women or, conversely, in men (12).

Gender distribution analysis has yielded varying results across studies. In a comprehensive literature review of 125 cases, 91 were identified as male and 33 as female, indicating a male predominance (9) . Conversely, a different retrospective study involving 95 lipoma cases reported 62 females and 30 males, suggesting that gender disparities may not be consistently observed (10).

Additionally another retrospective study reported no significant differences between genders, further complicating the understanding of gender distribution in oral lipomas (11).

Lipomas are rarely seen in the oral cavity. When present, they are most frequently located in the buccal mucosa, followed by the tongue. When lipomas are localized on the floor of the mouth, they can sometimes reach significant sizes, potentially interfering with speech and chewing, thus necessitating surgical intervention.(13-14)

In recent literature, the anatomical distribution of oral lipomas has been extensively documented. A literature review conducted by Furlong et al. involving 125 cases revealed that the parotid region was most commonly affected, with 30 cases identified, followed by the buccal mucosa (29 cases), lip (21 cases), submandibular region (17 cases), tongue (15 cases), palate (6 cases), floor of the mouth (5 cases), and vestibule (2 cases) (9). These findings highlight the varying prevalence of oral lipomas in different anatomical sites, emphasizing the need for awareness among clinicians regarding these locations (9).

Furthermore, a retrospective study found that among 46 oral lipoma cases, 21 were located in the buccal mucosa, 6 in the tongue, 6 in the lips, and 5 in the floor of the mouth. This reinforces the significance of the buccal mucosa as a common site for lipomas (2).

Histopathological evaluations have revealed a range of lipoma subtypes. Moreno et al. identified simple lipomas as the most prevalent type in their literature review of 95 cases, followed by fibrolipomas. Other subtypes were also noted, contributing to the diverse presentation of these tumors (15). In another retrospective study, subtypes such as conventional lipoma, fibrolipoma, pleomorphic lipoma, sialolipoma, osteolipoma, and intramuscular lipoma were documented, emphasizing the necessity for precise classification and understanding of the histopathological characteristics of oral lipomas (9).

The clinical characteristics of oral lipomas may be related to the location of the lesion. They generally represent slow-growing tumors associated with adipose tissue, with varying diameters, which can contribute to the likelihood of misdiagnosis.(16)

For treatment, it is typically sufficient to excise the lipoma without disrupting the capsule integrity, and aggressive excision or additional treatments are usually not required.(17) In our case, the lipoma was removed under the specified conditions, and there was no recurrence at the six-month follow-up.

4. Conclusion

Lipomas should be considered in the differential diagnosis of lesions originating from the buccal mucosa of the oral cavity. Benign lipomas with a slow growth pattern can reach extraordinary sizes. We recommend their removal as soon as possible, particularly in geriatric patients, as they may lead to nutritional issues.

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6. Figures

Figure 1. No pathological findings in the bone or teeth are seen in the orthopantogram image.

Figure 2. Swelling is observed in the vestibular sulcus of the lower anterior tooth

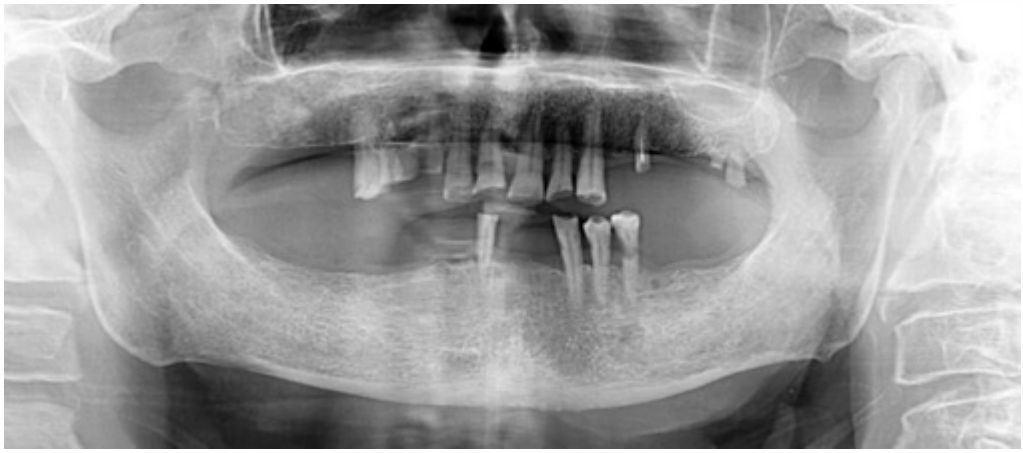

Figure 3.Image of the minimally invasive incision line and Lipoma tissue in the vestibular sulcus

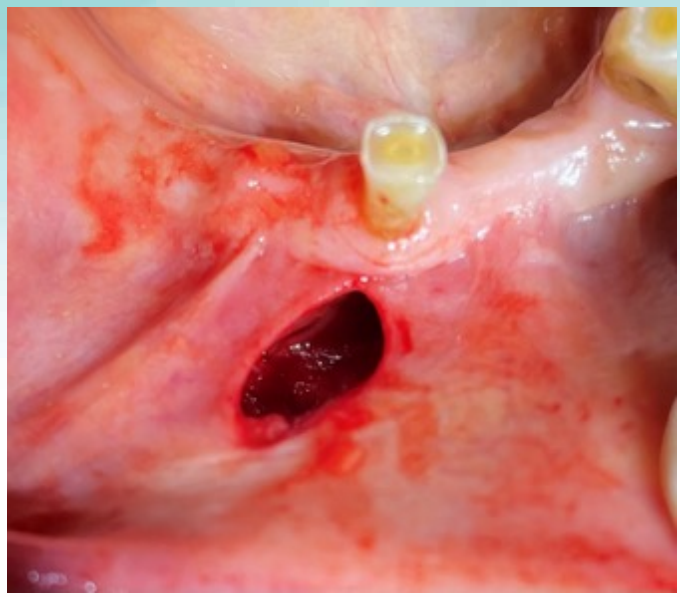

Figure 4. Image of the wound area after excisional biopsy

Figure 5. Primary closure of the biopsy site

Figure 6. Lipoma tissue sent for histopathological examination

[OP-051]

MANDİBULA KONDİL VE PARASİMFİZİS KIRIĞI: VAKA RAPORU

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Özet

Amaç: Bu vaka raporunun amacı; trafik kazası ve iş kazası sonucu mandibula kondil ve parasimfizis kırıklarının birlikte görüldüğü iki hastanın tedavilerinden ve 6 aylık takiplerini bildirmek ve güncel literatüre göre tedavi yaklaşımlarını değerlendirmektir.

Vaka Raporu ve Literatür Derlemesi: 2024 yılında Uşak Üniversitesi Ağız Diş ve Çene Cerrahisi Anabilim Dalı polikliniğine iş kazası sonucu başvuran 43 yaşında sistemik olarak sağlıklı erkek hastada (vaka1) yapılan klinik ve radyolojik muayene sonucu sol kondilde anteriomedial yönde deplase parçalı kırık ve sağ parasimfiziste vertikal olarak antero-posterior seyirli deplase fraktür hattı tespit edilmiştir. Hastanın tedavisi parasimfizis kırığı için intaroral, kondil kırığı için ise preaurikular yaklaşımla plak ve vida fiksasyonu kullanılarak yapılmıştır. Trafik kazası sonucu başvuran 26 yaşında sistemik olarak sağlıklı erkek hastada (vaka2) ise yapılan klinik ve radyolojik muayene sonucu sol kondilde anteriomedial yönde deplase kırık ve sol parasimfiziste vertikal olarak postero-anterior seyirli deplase parçalı fraktür hattı tespit edilmiştir. Hastanın tedavisi parasimfizis bölgesi için ekstraoral submandibular, kondil bölgesi için preaurikular yaklaşımla plak ve vida fiksasyonu kullanılarak yapılmıştır. Hastalara uygulanan tedavi yöntemimiz mevcut literatür taramasında elde edilen sonuçlarla karşılaştırılmıştır.

Sonuç: Postoperatif olarak birinci vaka altı ay, ikinci vaka dört ay takip edilmiştir. Kontroller sonucunda her iki vakada da elde edilen kapanış ilişkisinin ve ideal ağız açıklığının korunduğu görülmüştür. Literatür taraması ile elde edilen verilere göre kondil ve parasimfizis kırıklarının bir arada bildirildiği çalışmalarda da benzer tedavi yöntemleri kullanılarak benzer sonuçlara ulaşıldığı görülmüştür.
Anahtar Kelimeler: Mandibula fraktürü, Parasimfizis fraktürü, Kondil fraktürü, Açık redüksiyon

1. GİRİŞ

Mandibula fraktürleri en sık görülen yüz fraktürleri arasında dördüncü sırada yer almaktadır. Mandibula fraktürlerinin ise büyük bir kısmı kondil bölgesinde görülmektedir. Parasimfizis bölgesinde ise kondil bölgesine kıyasla daha az kırık gözlenmektedir (1). Mandibula fraktürlerinin uygun şekilde tedavisi bu bölgede daha sonradan oluşabilecek fonksiyonel ve anatomik bozuklukların gelişiminin engellemesi için büyük önem taşımaktadır.

Etyolojik faktörler arasında; trafik kazaları, işte ve evde oluşan kazalar, darp, ateşli silah yaralanmaları yer alır. Nadir de olsa, elektro-konvülsif tedavi esnasında, entübasyon sırasında oluşan, tümörlere ve osteomyelite bağlı patolojik kırıklar da görülebilmektedir(2). Mandibula kırıklarının tedavilerinde amaç, kırık fragmanlarının anatomik pozisyonlarında redüksiyon ve bu pozisyonlarda fiksasyon ile fonksiyonel devamlılığın ve oklüzyonun en az morbidite ile yeniden sağlanmasıdır (3). Bu vaka sunumunda, kondil ve parasimfizis kırığının bir arada bulunduğu iki hastanın tedavi sonuçları ve güncel literatür değerlendirilmesi yapılmıştır.

2. VAKA RAPOLARI

2.1 Vaka 1

Sistemik olarak sağlıklı, 43 yaşında, erkek hasta iş kazasına bağlı mandibular sağ parasimfiz ve sol kondil fraktürü ile kliniğe başvurdu. Yapılan klinik ve radyolojik muayene sonucu hastanın miniplak ve rekonstrüksiyon plağı kombinasyonu ile tedavi edilmesi planlanmıştır. Kondil bölgesine ulaşmak amacıyla

preaurikuler yaklaşım için üç cm'lik cilt insizyonu yapıldı. Künt diseksiyon ile kutanöz ve subkutanöz dokular diseke edildi. Auriculotemporal sinirin seyri sinir stimülatörü ile tespit edildi. Auricolotemporal arter ve ven, diseksiyon sonrası suture edildi. Derin temporal kas fasyasının yüzeyel laminası kaldırılarak derin temporal boşluğa ulaşılıp zigomatik arka kadar künt diseksiyon ile ilerlendi ve eklem kapsülüne ulaşıldı. Eklem kapsülü insize edilerek eklem kavitesine ulaşıldı. Kırık fragman lokalize edildi. Paslanmaz çelik teller ile maksilla ve mandibula doğru oklüzyon sağlanarak intermaksiller fiksasyona alındı. İntraoral yaklaşım için 32 numaralı bölgeden 47 numaralı bölgeye kadar mukogingival hat boyunca insizyon yapıldı. Mandibular bazise kadar tam kalınlıklı flap kaldırıldı. Kırık hattının yanında bulunan mental sinir diseke edilerek serbestleştirildi. Fragmanlar doğru pozisyona getirildikten sonra mini plak ve rekontrüksiyon plağının uyumu sağlandı. Kırık hattının superiorunda bir adet miniplak, inferiorunda ise bir adet rekonstrüksiyon plağı kullanılarak fiksasyon yapıldı. Anteriora ve mediale deplase olan kondil başı ve disk doğru pozisyona getirildi. İMF açıldı. Disk retrodiskal dokulara süture edildi. Kondil başının fiksasyonu için tek vida osteosentezi planlandı. Ancak, fiksasyon sırasında kırığın bir parçası fiske edilemeyecek kadar parçalandı. Parçalanan doku çıkarıldı ve kalan fragmanlar 10mm'lik vida kullanılarak fiske edildi. Kondil fiksasyonu sonrası mandibula açma kapama hareketleri yaptırılarak kırık hatları kontrol edildi. Hasta, sekiz hafta boyunca arch barlar ve intermaksiller elastikler ile düzenli kontrollere çağırıldı. Sekizinci haftanın sonunda arch barlar çıkartıldı ve hastaya egzersiz önerisinde bulunuldu. Birinci ay kontrolünde ağız açıkığı18mm olan hastanın üçüncü ay kontrolünde açıklığın 35 mm'ye ulaştığı görüldü.

2.2 Vaka 2

Sistemik olarak sağlıklı, 26 yaşında, erkek hasta trafik kazasına bağlı mandibular sol parasimfiz, sağ kondil fraktürü ve anterior alveol kırığı ile kliniğe başvurdu. Yapılan klinik ve radyolojik muayene sonucu hastanın miniplak ve rekonstrüksiyon plağı kombinasyonu ile tedavi edilmesi planlanmıştır. Paslanmaz çelik teller ile maksilla ve mandibula doğru okluzyon sağlanarak İMF'ye alındı. Mandibular basisten iki cm inferorda olacak şekilde extraoral insizyon hattı belirlendi ve buradan cilt insizyonu yapıldı. Künt diseksiyonla kırık hattının periostuna kadar ilerlendi ve kırık hattı ortaya çıkarıldı. Kırık fragmandan çıkarılan alveol parçası serum fizyolojik içeren kaba koyuldu. Fragmanlar doğru pozisyona getirildikten sonra miniplak ve rekontrüksiyon plağının uyumu sağlandı. Kırık hattının süperiorunda bir adet miniplak, inferiorunda ise bir adet rekonstrüksiyon plağı kullanılarak fiksasyon yapıldı. Kırık fragmandan çıkarılan serum fizyolojikte bekletilen fragman bölgeye 12 mm'lik mini vida ile fikse edildi. Preaurikuler yaklaşım için üç cm'lik cilt insizyonu yapıldı. Künt diseksiyon ile kutanöz ve subkutanöz dokular diseke edildi. Auriculotemporal sinirin seyri sinir stimülatörü ile tespit edildi. Auricolotemporal arter ve ven, diseksiyon sonrası suture edildi. Derin temporal kas fasyasının yüzeyel laminası kaldırılarak derin temporal boşluğa ulaşılıp zigomatik arka kadar künt diseksiyon ile ilerlendi ve eklem kapsülüne ulaşıldı. Eklem kapsülü insize edilerek eklem kavitesine ulaşıldı. Kırık fragman lokalize edildi. Kırık hattına bir adet miniplak fikse edildi. İMF açıldı. Kondil fiksasyonu sonrası mandibulaya açma kapama hareketleri yaptırılarak kırık hatları kontrol edildi. Hasta altı hafta boyunca arch barlar ve intermaksiller elastikler ile düzenli kontrollere çağırıldı. Altıncı hafta sonunda arch barlar çıkartıldı, ağız açıklığı 20mm olarak ölçüldü ve alveol kırığının ossifikasyonunun tam olmadığı görüldü. Bu nedenle mandibulaya arch bar tekrar adapte edildi. Postoperatif dördüncü ayda hastanın ağız açıklığı 32 mm olarak ölçüldü.

3. TARTIŞMA

Demirdöver ve ark.(3) yaptığı retrospektif çalışmada 124 vaka incelemiş ve bu vakalarda mandibula fraktürlerinin %30.7 oranında trafik kazasına bağlı, %4 oranında da iş kazasına bağlı olarak oluştuğunu görmüştür. Bu fraktürler içinde de ikili fraktürlerin oranını %35.5, kondil ve parasimfizis kırığının beraber görülme olasılığını da %4.03 olarak ölçmüştür. Bu vaka raporunda kliniğe başvuran hastaların trafik ve iş kazası sonucunda kondil ve parasimfizis fraktürlerinin bir arada oluştuğu görülmüştür.

Iizuka ve ark.(4) miniplaklarla fiksasyonun, transosseöz tellemeden daha fazla stabilite sağladığını savunmuş ve parçaların düzgün şekilde hizalanırsa tek miniplakların yeterli olabileceğini göstermiştir. Hammer ve ark.(5) da fiksasyon için bikortikal vidaların da kullanılabileceğini savunmuştur. Bu vaka raporunda birinci vakada vida ile ikinci vakada ise miniplak ile fiksasyon sağlanmışıtr.

Takenoshita ve ark.(6) yaptığı bir çalışmada açık redüksiyondan sonra en az iki hafta İMF'nin kalması gerektiğini önermiştir. Lindahl(7) ayrıca mandibula korpusunun eş zamanlı kırıklarının tek taraflı kondiler kırıklara kıyasla iki taraflı kırıklarda daha sık olduğunu bulmuştur.

Meitzs ve ark.(8) tedavi başarısını 40mm'den daha fazla ağrısız ağız açıklığı, genel olarak iyi hareketlilik, oklüzyonun restorasyonu, stabil temporomandibular eklemler, preauriküler depresyonun olmaması, kemiksel kaynama, yüz ve çene simetrisi, sorunsuz konuşma ve yutma parametrelerine göre değerlendirmiştir. Tatmin edici sonuçlar için herzaman tam anatomik yeniden konumlandırma gerekmediğini savunmuştur.

Kural olarak hareketli bir çene ve aktif fizyoterapi ile gelişmez ankiloz gelişme ihtimali çok nadirdir(9). Bununla birlikte, hipomobilitenin yaklaşık %8-10 oranında görüldüğü Ellis ve ark.(10) tarafından bildirilmiştir. İMF süresi uzadıkça hipomobilite olasılığı artmaktadır. Bu nedenle, stabil bir oklüzyon için erken mobilizasyon uygulanmalıdır. Kapalı redüksiyon ile tedavi edilen olgularda 10-50 yıl sonra geç artritik değişiklikler ortaya çıkabilir ancak uzun dönem takip eksikliği vardır.

4. SONUÇ

Birinci vakanın postoperatif altı aylık, ikinci vakanın dört aylık takibi yapılmış olup her iki hastada da eski oklüzyonu, ideal ağız açıklığı, çene yüz simetrisi, sorunsuz çiğneme ve konuşma fonksiyonları sağlanmış herhangi bir nörosensoriyel hasar görülmemiştir. Elde edilen bu sonuçlarda erken mobilizasyon uygulamalarının etkili olmuş olabileceği düşünülmektedir.

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[OP-064]

ATROFİK MAKSİLLALARDAKİ TEDAVİ YAKLAŞIMLARI

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ÖZET

Giriş
Diş çekimini takiben kuvvet dağılımının değişmesi, çene kemiği destekleyecek köklerin ve kuvvetlerin olmaması maksillayı ciddi atrofiye sürükler. En hızlı atrofi ilk sene içinde gerçekleşir. Yapılan çalışmalar 12 ayda vertikal olarak 2mm horizontal olarak 4 mm kayıp olduğunu göstermiştir. Uzun süren dişsizlik, travma, enfeksiyon, maksiller sinüsün pnömatizasyondaki yetersizlik ve ablatif tümör cerrahisi gibi nedenlerle atrofi şiddetlenir ve basit dental implant uygulaması imkansız hale gelebilir(1).Özellikle şiddetli rezorpsiyon derecesine sahip dişsiz maksilla hastalarının tedavilerinde çeşitli tekniklere başvurmak gerekir. Bunlar; kemik ve sinüs ogmentasyonları ; pterigoid apofizine implant yerleştirilmesi; kısa ve geniş implantların kullanılması; zigomatik implantların kullanımı; onley iliak greftler ve le fort 1 osteotomisiyle birlikte interpozisyonel greftleme gibi çeşitli teknikler kullanılabilir.

Vaka Raporu
Fakültemize Eylül 2023 – Ağustos 2024 arasında ciddi atrofik maksilla ile 4 hasta başvurdu. Hastaların 2' si kadın 3' ü erkek hastaydı. Hastaların ortalama yaşı 21-70 yaş aralığında olduğu görüldü. Dişsiz hastalarda atrofinin görülmesinin fizyolojik sebebi; üst çene posterior bölgede dişlerin çekimi sonrası bir yandan kretlerin dış yüzünden atrofi devam ederken diğer yandan sinüslerin pnömatizasyonu nedeni ile osteoklastik aktivite ile kretlerin yıkımı gerçekleşir. Sinüs boşluğu, daha önceden dişlerin köklerinin işgal ettiği alveoler kemiğin içlerine doğru genişler. Böylece maksiller alveoler kemik hem dıştan hem içten rezorbe olur. Böylece var olan kemik yüksekliği çift taraflı olarak hızla azalır(2). Başvuran hastalar değerlendirildiğinde 2 hastaya iliak gretle onley greftleme, 1 hastaya zigoma implantları 1 hastaya ise le fort 1 osteotomisi ile iliak greftle interpozisyonel greftleme yapıldı.

Tartışma
Vertikal mesafesi yeterli horizontal olarak yetersiz bıçak sırtı kretlerde (cawood-howell sınıf 4-5) onley iliak greftler önemli bir tedavi alternatifi oluşturmaktadır. İliak greftlerin spongioz içeriğinin fazla olması bu sebeple kanlanmasının yüksek olması, donör alan morbititesinin az olması, kullanım kolaylığı gibi sebepler sayesinde maksillada yeterli kemik oluşturmak için sıkça kullanılmaktadır.

Zigomatik implantlar 1988 yılında, Dr. Branemark tarafından uygulandı. Dr. Branemark, zygomatik implantların atrofik maksillası olan hastalar için etkili bir çözüm sunduğunu gösterdi.(3) Zigomatik implantlar ilk başta neoplastik hastalık sonrası maksillektomi geçirmiş hastalara önerilmiş daha sonra şiddetli posterior alveolar sırt rezorpsiyonu olan hastalarda kullanılmaya başlanmıştır.

Zigomatik implantlar yapılan çalışmalarda yüksek başarı bildirmektedir. Aparacio ve ark. 1031 hasta 2131 zigomatik implantın 6 aydan 12 yıla kadar incelenmesi sonucu %98,1 sağkalım bildirmektedir.(5) Aynı zamanda zigomatik implantlarda dönor saha morbititesisin olmaması, kemik greftine ihtiyaç duyulmaması, daha az cerrahi işlem gereksinimi olması, 3-6 ay gibi sürede protezlerin yüklenebilmesi gibi sebeplerden ötürü sıkça tercih edilmektedir.(6)

Maksiller yetersizliği olan hastalarda onlay kemik greftleri, maksiller sinüs greftlemesi gibi cerrahi prosedürler implant yerleştirmek için yeterli hacim yaratabilir fakat çeneler arası ilişkiyi yeniden oluşturmak için yeterli olmayabilir. Le fort 1 osteotomisiyle birlikte interpozisyonel greftleme çeneler arası dikey, ön-arka ve transversal uyumsuzlukları düzeltmek için maksillanın öne ve aşağıya doğru yeniden konumlandırılmasına izin verirken, interpozisyonel kemik greftleri ile implantların yerleştirilmesi için yeterli kemik artışına izin verir.

Le fort 1 osteotomisi ile birlikte iliak greft ile interpozisyonel greftleme cawood&howell sınıf 6 hastalarda daha önce kullanılmış; implant sağkalımı, kemik hacminin artışı, hastanın fasiyal görünüm değişimi açısından yüksek başarı bildirilmektedir. Chiapasco ve ark. 'nın 39 hasta üzerinde yaptıkları çalışmada implant sağ kalım oranı %94.5 olarak görülmüştür.(4)

Sjöström ve arkadaşları tarafından yapılan çalışmada inley, onlay iliak blok greftleme, interpozisyonel greftleme tekniklerinin implant sağkalımı açısından önemli bir fark bulunamamıştır. 24 hastaya yapılan 192 implantın sadece 20'si kaybedilmiş. İmplant sağkalım oranı %90 olarak görülmektedir.(7)

Sonuç
Post-op kontrollerinde herhangi bir enfeksiyon görülmedi. İliak greft uygulanan hastalara eş zamanlı sinüs lift yapıldığı için implant uygulanması için 6 ay beklendi. Zigoma implantı uygulanan hastalara ise 6 ay geçtikten sonra protez bölümüne yönlendirildi.

Anahtar Kelimeler

Atrofik Maksilla, İmplant, İliak Greft, Kemik kaybı, Alveol Kemik

TREATMENT APPROACHES IN ATROPHIC MAXILLAS

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Abstract

Objective: Post-extraction, the maxilla can experience significant atrophy due to the loss of tooth roots and supporting forces. This atrophy, which is most pronounced within the first year, typically results in a vertical loss of 2 mm and a horizontal loss of 4 mm. Long-term edentulism can exacerbate this atrophy due to factors like trauma, infection, inadequate maxillary sinus pneumatization, and tumor surgery. As a result, standard dental implants may become unfeasible.(1)Severe maxillary resorption necessitates various treatment techniques, including bone and sinus augmentations, pterygoid apophysis implants, short and wide implants, zygomatic implants, iliac grafts, and Le Fort I osteotomy.

Case Report: Between September 2023 and August 2024, 4 patients with severely atrophic maxilla applied to our faculty. Two of the patients were female, and three were male. The average age of the patients ranged between 21 and 70 years.

The physiological reason for atrophy in edentulous patients is as follows: after tooth extraction in the posterior region of the upper jaw, atrophy continues on the external surfaces of the ridges while, at the same time, the resorption of the ridges occurs due to osteoclastic activity caused by sinus pneumatization. The sinus cavity expands into the alveolar bone that was previously occupied by the roots of the teeth. Consequently, the maxillary alveolar bone resorbs both externally and internally, leading to a rapid bilateral decrease in the existing bone height.(2)

Upon evaluating the patients who applied, onlay grafting with iliac grafts was performed on 2 patients, zygomatic implants were used in 1 patient, and interpositional grafting with iliac grafts combined with Le Fort 1 osteotomy was performed on 1 patient.

Discussion

Onlay iliac grafts are an important treatment alternative for knife-edge ridges (Cawood-Howell Class 4-5) where vertical distance is sufficient but horizontal distance is inadequate. The high vascularization of iliac grafts due to their rich cancellous content, low donor site morbidity, and ease of use make them frequently preferred for creating sufficient bone in the maxilla.

Zygomatic implants were introduced in 1988 by Dr. Branemark. He demonstrated that zygomatic implants provide an effective solution for patients with atrophic maxillae. Initially recommended for patients who underwent maxillectomy due to neoplastic diseases, zygomatic implants later began to be used in cases of severe posterior alveolar ridge resorption.(3)

Studies on zygomatic implants report high success rates. Aparicio et al. examined 2131 zygomatic implants in 1031 patients over periods ranging from 6 months to 12 years, reporting a survival rate of 98.1%. Additionally, zygomatic implants are frequently preferred because they do not require a donor site, eliminate the need for bone grafting, involve fewer surgical procedures, and allow prosthetics to be loaded within 3-6 months.(6)

In patients with maxillary insufficiency, surgical procedures such as onlay bone grafts and maxillary sinus grafting can create sufficient volume for implant placement. However, they may not adequately restore intermaxillary relationships. Combining Le Fort 1 osteotomy with interpositional grafting allows for repositioning the maxilla forward and downward to correct vertical, anteroposterior, and transverse discrepancies between the jaws. Interpositional bone grafts also enable sufficient bone augmentation for implant placement.

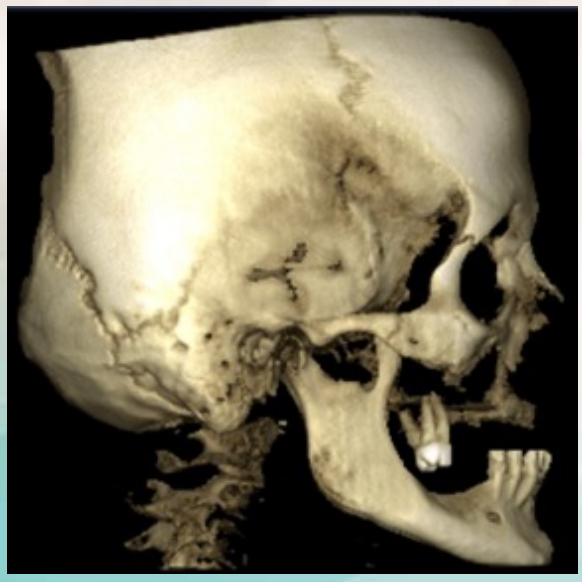
Le Fort 1 osteotomy combined with iliac graft interpositional grafting has previously been used in Cawood-Howell Class 6 patients, showing high success in terms of implant survival, bone volume augmentation, and changes in the patient's facial appearance. In a study conducted by Chiapasco et al. involving 39 patients, the implant survival rate was reported as 94.5%.(5)

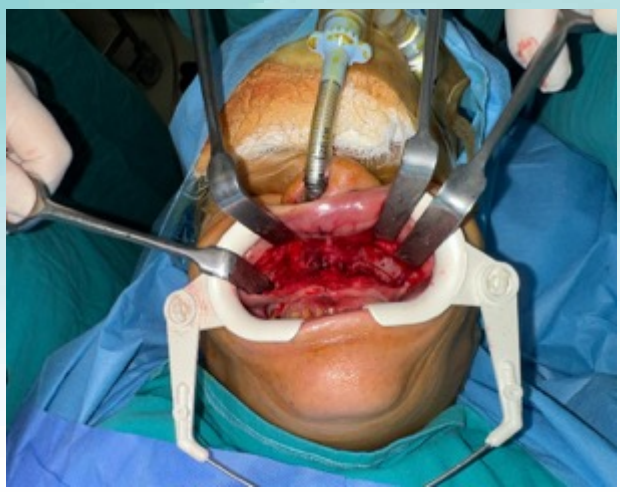
In a study by Sjöström et al., no significant differences were found in implant survival between inlay, onlay iliac block grafting, and interpositional grafting techniques. Of the 192 implants performed on 24 patients, only 20 were lost, yielding an implant survival rate of 90%.(7)

Conclusion: No infections were noted during postoperative evaluations. Patients receiving iliac grafts were advised to wait 6 months before implant placement. Zygomatic implant patients were directed to the prosthetics department after 6 months.

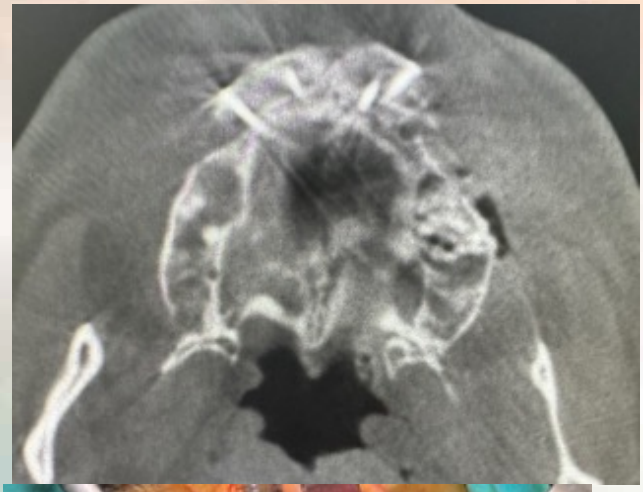
Keywords: Atrophic Maxilla, Implant, Iliac Graft, Bone Loss, Alveolar Bone

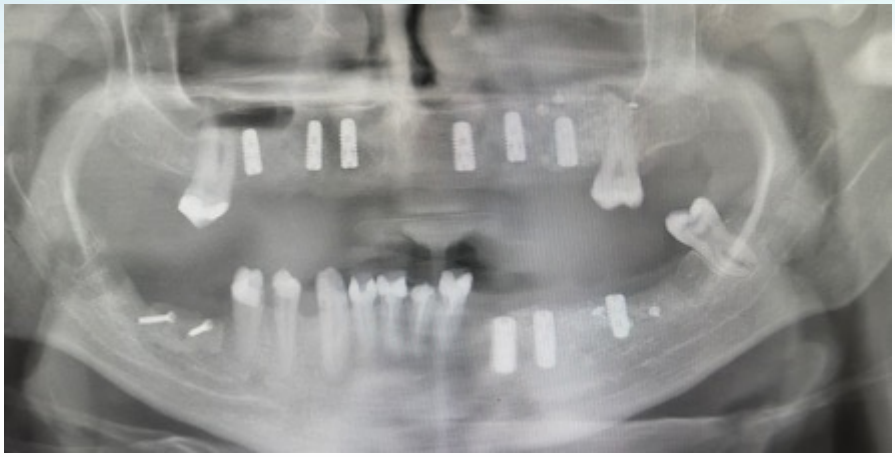
1) İnterpozisyonel greftleme



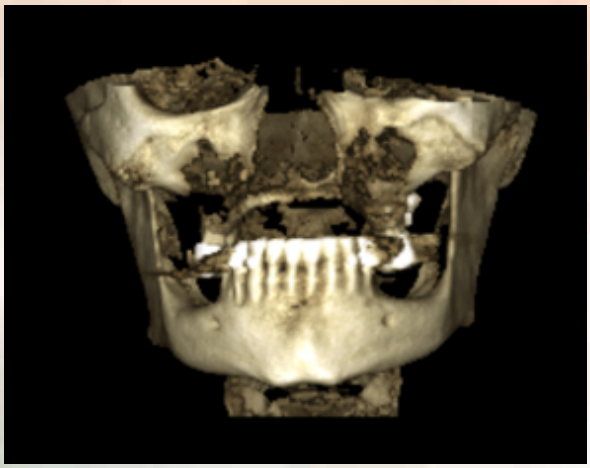


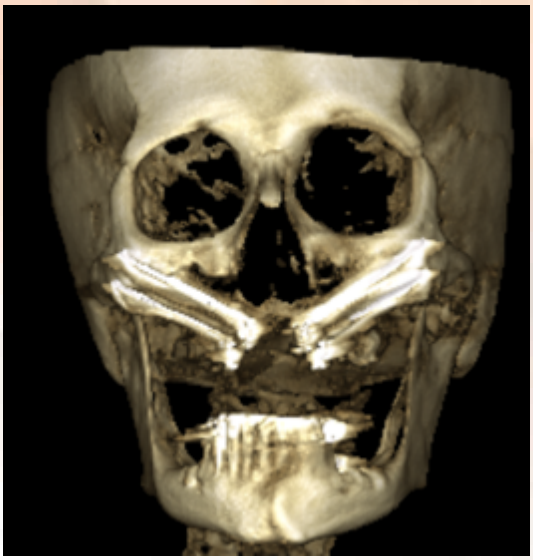
2) İliak Greftleme

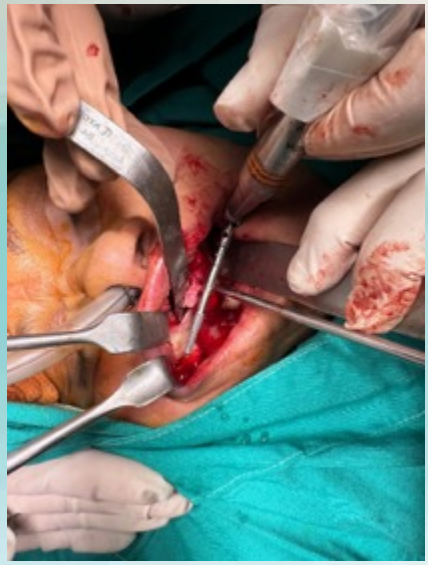




3) Zigoma İmplantları







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[OP-065]

Mandibula Kırıklarında Klinik Deneyimleimiz:Vaka Derlemesi

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Giriş: Mandibula kırıkları,maksillofasiyal bölgede burun,orbita, zigomadan sonra dördüncü en sık görülen kırıklardır.Kırıklar etyolojik olarak incelendiğinde trafik kazaları ve fiziksel şiddet en sık nedenleri oluşturmaktadır.Tanı,düz röntgen,panaromik radyografi ve bilgisayarlı tomografi (BT) taramaları ile yapılabilir.Kırığın en sık görüldüğü bölgeler kondil,gövde, angulus, ve parasimfizdir. Mandibula kırıklarında tedavinin prensibi,kırık segmentlerini anatomik pozisyona getirmek,uygun okluzal ilişkiyi sağlamak, iyileşme olana kadar fragmanların birbirine temasını sağlamaktır. Mandibula kırıklarında başlıca iki yaklaşım açık redüksiyon ve kapalı redüksiyondur. Kapalı redüksiyon, kırık alan cerrahi olarak açılmadan oklüzyon rehberliği kullanılarak barlar,teller,vidalar ve splintler ile yapılan tedavi yöntemidir. Açık redüksiyonda kırık alan cerrahi olarak açılır ve kırık fragmanlarının plaklar yardımı ile immobilizasyonu sağlanarak primer kemik oluşumuna izin verir.

Vaka Raporu: Ocak 2024 -ağustos 2024 tarihleri arasında mandibulada kırık şikayeti ile fakülte kliniğimize başvuruldu.Ortalama yaş aralığı 17-68 idi.Kırığa yol açan nedenler arasında düşme,darp, trafik kazası ve diğer sebepler (diş çekimi sırasında patolojik kırık) görüldü.Kliniğimizde tedavi edilen hastalar incelendiğinde kırıkların en sık görüldüğü bölgeler angulus, parasimfiz ve kondil olarak tespit edildi.Bu hastalarda intermaksiller fiksasyona ilaveten plak vida ile rijit fiksasyon sağlandı.Kondil kırığı eşlik eden hastalarda intermaksiller fiksasyon 4-6 hafta arası değişen sürelerde devam edildi.intermaksiller fiksasyon için arch bar veya self drilling özelliği bulunan intermaksiller fiksasyon mini vidaları kullanıldı. İntermaksiller fiksasyon mini vidaları tornavida yardımıyla üst ve alt çeneye 4er adet,eşit aralıklarla,üst ve alt çenedeki mini vidalar karşılıklı gelecek şekilde yerleştirildi.

Sonuç: Hastaların post -op takiplerinde herhangi bir malokluzyon,enfeksiyon,plak ekspoziyonu görülmedi.Normale yakın ağız açıklığı sağlandı.

Anahtar Kelimeler: Mandibula, Kırık, İntermaksiller fiksasyon

Our Clinical Experiences in Mandible Fractures: Case Study

İntroduction: Mandible fractures are the fourth most common fractures in the maxillofacial region after the nose, and zygoma. When fractures are examined etiologically, traffic accidents and physical violence are the most common causes. The most common areas of fracture are the condyle, corpus, angulus, and symphysis.The principle of treatment in mandible fractures is to bring the fracture segments to the anatomical position,to provide appropriate occlusal relationship, to ensure the contact of the fragments until healing.The two main approaches in mandible fractures are open reduction and closed reduction.Closed reduction is a treatment method performed with bars, wires, screws and splints using occlusion guidance without surgically opening the fracture area.In open reduction,the fracture area is surgically opened and the fracture fragments are immobilized with the help of plaques,allowing primary bone formation

Case: Between January 2024 and August 2024,the patient was admitted to our faculty clinic with the complaint of a fracture in the mandible. Falling,battering,traffic accident and other causes (pathological

fracture during tooth extraction) were among the causes of fracture.When the patients treated in our clinic were examined,the most common areas of fractures were found to be angulus, parasymphysis and condylesis.In addition to intermaxillary fixation,rigid fixation was achieved with plate screws in these patients.Intermaxillary fixation was continued for 4-6 weeks in patients with condyle fractures.intermaxillary fixation mini screws with arch bar or self-drilling feature were used for intermaxillary fıxation.

Conclusion: In the post-op follow-up of the patients, no malocclusion, infection, plaque expression was observed. Mouth opening close to normal was achieved.

Keywords: Mandible, Fractures, Intermaxillary fixation

GİRİŞ

Maksillofasiyal kırıklar ;yüz bölgesinde oluşan travmalar sonucu meydana gelir.Mandibula kırıkları tüm yüz kırıklarının %12 ile %56 'sını oluşturmaktadır. Mandibulanın anatomisi, kemik mineral içeriği ve çiğneme kasları kırığın oluşumunu etkiler.Mandibula kırıklarının ana nedeni kişiler arası şiddet bulunmuştur. Bunu düşmeler, trafik kazaları, ev kazaları, hayvan saldırıları, spor yaralanmaları ve iş kazaları takip eder. Pediatrik yaş grubunda ise düşme ve trafik kazaları en sık sebeplerdir.(1,2)Tanı,düz röntgen,panaromik radyografi ve bilgisayarlı tomografi (BT) taramaları ve klinik muayene ile yapılabilir.Mandibula kırıklarında başlıca iki yaklaşım açık redüksiyon ve kapalı redüksiyondur. Kapalı redüksiyon, kırık alan cerrahi olarak açılmadan oklüzyon rehberliği kullanılarak barlar,teller,vidalar ve splintler ile yapılan tedavi yöntemidir. Açık redüksiyonda kırık alan cerrahi olarak açılır ve kırık fragmanlarının plaklar yardımı ile immobilizasyonu sağlanarak primer kemik oluşumuna izin verir.(3)

VAKA RAPORU

Ocak 2024 -ağustos 2024 tarihleri arasında mandibulada kırık şikayeti ile 8 hasta fakülte kliniğimize başvurdu.Ortalama yaş aralığı 17-70 idi.Bu hastaların 5'i erkek 3'ü kadındı.Alınan anamnezde kırığa yol açan nedenler arasında düşme,darp, trafik kazası ve diğer sebepler (diş çekimi sırasında patolojik kırık) görüldü.Radyografik muayene sonucunda hastaların 3 tanesinde anguluskırığı , 2 tanesinde angulus+parasimfiz kırığı, 1 tanesinde corpustan angulusa uzanan kırık , 1 tanesinde angulus+kondil kırığı ve 1 tanesinde parasimfiz+kondil kırığı vardıHastaların hepsine genel anestezi altında ORIF , yani internal fiksasyon ve açık redüksiyon yapıldı.Angulus kırığı olan hastalara Champy'nin ideal osteosentez çizgilerine uygun olacak şekilde tek bir miniplak ile rijit fiksasyon yapıldı.Kondil kırığı eşlik eden 2 hastaya , intermaksiller fiksasyon 4 hafta devam edildi ve bu süreçte hastalara yumuşak diyet önerildi.İntermaksiller fiksasyon için arch bar veya self drilling özelliği bulunan intermaksiller fiksasyon mini vidaları kullanıldı. İntermaksiller fiksasyon mini vidaları tornavida yardımıyla üst ve alt çeneye 4er adet,eşit aralıklarla,üst ve alt çenedeki mini vidalar karşılıklı gelecek şekilde yerleştirildi.Postoperatif dönemde hastalara 5 gün süresince antibiyotik tedavisi uygulandı.Yapılan kontrollerde herhangi bir malokluzyon,enfeksiyon,plak ekspoziyonu görülmedi.Normale yakın ağız açıklığı sağlandı.

TARTIŞMA

Mandibula kırıkları en sık kondil , korpus ve angulusta meydana gelir. Bu bölgelerin anatomik olarak daha zayıf olduğu literatürde tanımlanmıştır.Çene kırığının oluşma yerini ve şeklini belirleyen temel faktör travmanın yeri ve şiddeti ile mandibulanın anatomik zayıf noktalarının etkileşimidir. Kırık doğrudan darbenin geldiği yerde oluşabileceği gibi, iletilen güçler kontralateral tarafta zayıf noktalarda kırığa yol açabilir. Korpusa gelen darbeler sıklıkla ipsilateral tarafta anatomik zayıf nokta olan mental foramenden geçen bir kırığa ve kontralateral tarafta ya angulus ya da subkondilar bölgede kırığa yol açarlar. Angulus bölgesinde yer alan bir 3. molar diş, özellikle henüz çıkmamışsa anatomik olarak zayıf nokta oluşturur. Ramus bölgesi kondil, angulus ve korpusa göre kırık oluşumuna daha az elverişlidir. Bu bölgeye gelen darbeler ramusu saran kuvvetli çiğneme kasları ile kısmen emilir ve üçgen şeklindeki kemik darbeyi nispeten daha zayıf bölge olan kondil boynuna iletir. Alt kesici dişlere gelen darbeler alveolar kırıklara yol açabilir. Molar ve premolar dişlerin kökleri ile kortikal kemik arasındaki mesafenin geniş olması nedeniyle posterior alveol kırıkları daha nadirdir.(3)Sonuçta travmaya uğramış mandibulada kırık paterni , intrinsik olarak mandibulanın kemik anatomisine ve ekstrinsik olarak mandibulaya tutunan kaslar , ligamentler ve darbenin yönü ve oluştuğu noktaya bağlıdır.(4) Mandibulaya gelen kuvvetler kemikte kompresyon ve gerilim alanlarının oluşmasına neden olur. Travma sonrasında kırık parçalar bu güçlerin oluşmasıyla yer değiştirebilir. Kırık parçaların tedavisi bu alanlar dikkate alınarak yapılır. Elevatör ve depressör kasların ve oklüzal kuvvetlerin birleşimiyle birlikte mandibulanın alt taraflarında sıkışma alanları oluşurken alveol bölgesinde gerilme alanları oluşmaktadır. Mandibulada kırıklar daha çok gerilim bölgelerinde oluşmaktadır. En fazla gerilimin oluştuğu alanlar kondil boynu, angulus, sigmoid çentik ve simfizdir. (5) Mandibula

kırıklarının ana nedeni kişiler arası şiddet bulunmuştur. Bunu düşmeler, trafik kazaları, ev kazaları, hayvan saldırıları, spor yaralanmaları ve iş kazaları takip eder. 20-29 yaş arası düşük eğitim seviyesindeki erkek hastalar ana risk kategorisinde gösterilmiştir.Mandibula kırıklarının tanısı anamnez, klinik değerlendirme ve radyolojik bulguların değerlendirilmesiyle konulur.Klinikte intraoral ve ekstraoral olarak muayene edilir.Mandibula kırığını işaret eden en önemli klinik bulgular ağrı , bozulmuş oklüzyon, parestezi, anestezi, dişlerde hasar , hematom ve ödemdir.Kondil kırıklarının tespitinde oklüzyon kontrolü iyi bir yöntemdir. Tek taraflı kondil kırıklarında etkilenen tarafta erken temas olurken, etkilenmeyen tarafta açık kapanış olur. Bilateral kondil kırıklarında ise retrognati ve anteriorda açık kapanış vardır. Ağız açma sırasında deviasyon görülebilir. Dişsiz hastalarda oklüzal temaslar olmadığı için kondil kırıklarının tespiti zordur. Bu tür vakalarda radyografik incelemeler yapılmalıdır. (6) Radyografik incelemeler düz röntgen,panaromik radyografi , bilgisayarlı tomografi (BT) ve konik ışınlı bilgisayarlı tomografi taramaları (CBCT) ile yapılır.Mandibula kırıklarında tedavi prensipleri; kırık segmentleri anatomik pozisyona getirmek, uygun okluzal ilişkiyi sağlamak, iyileşme olana kadarfragmanların birbirine temasını ve enfeksiyon kontrolünü sağlamaktır. Bu amaçla iki girişim uygulanır. İlk olarak disloke olan kemik normal konuma getirilip kırığın redüksiyonu sağlanır. İkinci olarak da kırık iyileşmesi tamamlanana kadar kırığın fiksasyonu sağlanır. (7) Intermaksiller fiksasyon , dentisyonun durumuna göre çeşitli tekniklerle gerçekleştirilir. IMF/MMF , dişi bir stabilite noktası olarak kullanarak , çeneyi okluzyonda eksternal olarak sabitleyen ve mandibulada kırık segmentleri immobilize eden bir tekniktir.IMF süresi 4-6 hafta arasında değişir. Daha uzun süreli fiksasyon TME 'de ankiloz, kas atrofisi, zayıf hareket aralığı ve interinsizal açıklık kaybı gibi sorunlara yol açabilir. Bunun için Erich arc bar , Ivy loop tekniği , IMF vidası , gunning split (dişsiz hastalarda segment redüksiyonunda kullanılır.) , eksternal pin fiksasyonu gibi teknikler uygulanır (8) . ORIF yani açık redüksiyon , kırık hattının cerrahi olarak açılıp doğrudan görülmesi ve redüksiyonun bu şekilde yapılarak plak vida sistemleri ya da sadece lagscrew vida ile fiksasyonun sağlanması işlemidir. Champy ve ark. mandibula kırıklarının iyileşmesi için mutlak rijit fiksasyonun zorunlu olmadığını göstermiş ve angulus kırıkları için mandibula üst sınırında tek bir kompresyonsuz miniplak kullanılmasını önermiştir. Bu teknikle plak boyutu küçük ve vidalar monokortikal olduğu için plakların diş köklerine zarar vermeden güvenli bir şekilde yerleştirilmesi mümkün olmuştur. (9)

SONUÇ

Mandibula kırıkları maksillofasial bölgede en sık kırılan kemiklerden biridir. Tedavide amaç hastaya iyi bir oklüzyon saglamak ve en kısa zamanda çene hareketi ve çiğneme fonksiyonlarını geri kazandırmaktır.Mandibula kırıklarının tedavi planlamasında kırığın lokalizasyonuna, türüne, segmentlerin yer degistirme durumuna, hastanın yaşına ve medikal durumuna bakılıp cerrahi yöntemin uygunluğu da değerlendirilerek en az komplikasyon oluşturabilecek en basit yol seçilmelidir.

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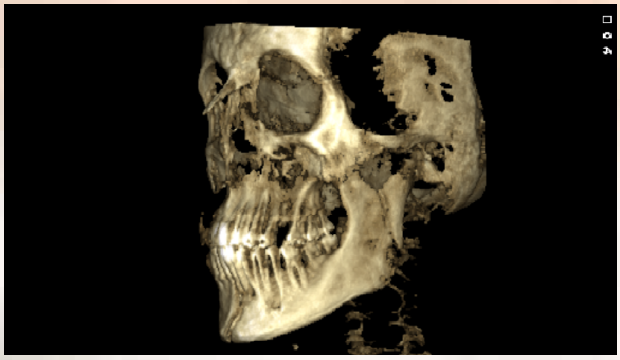
1.VAKA



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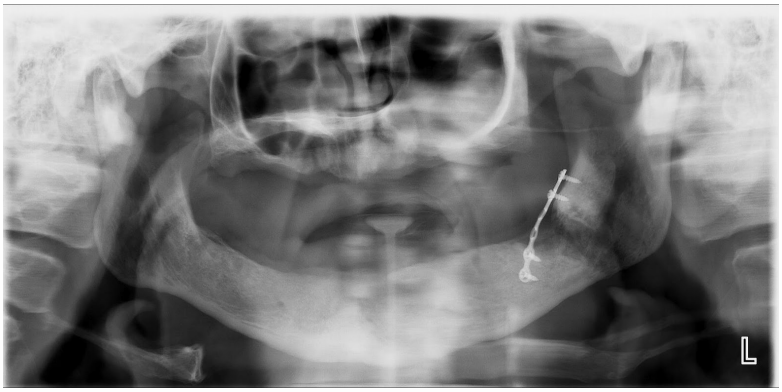

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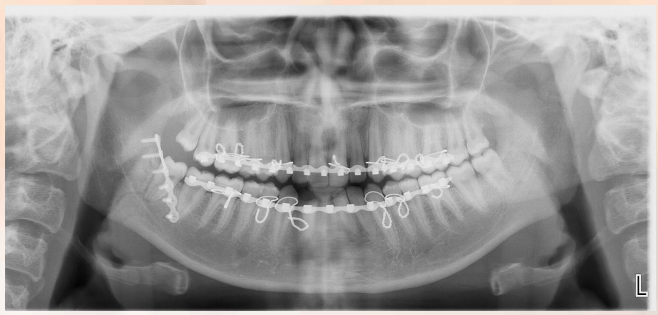

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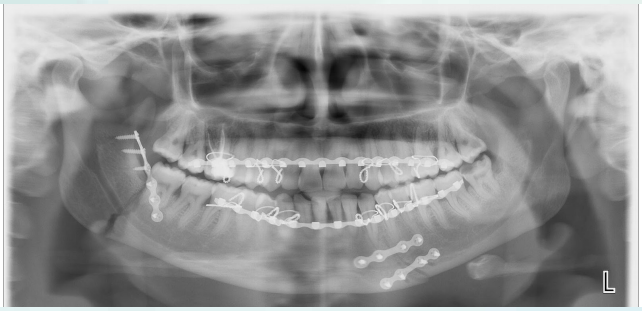

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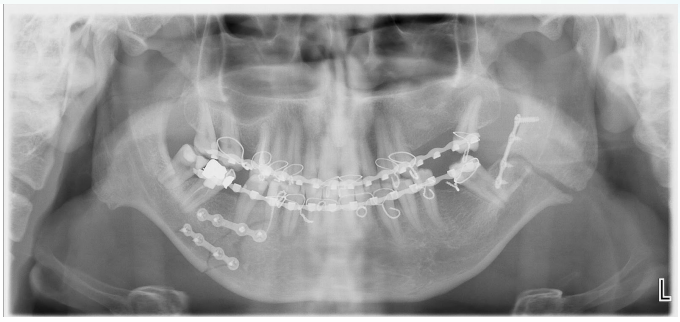

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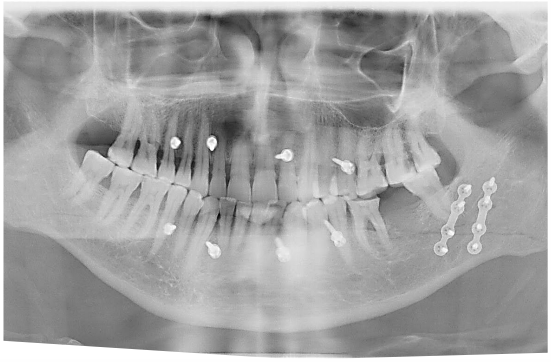

[OP-066]

Atrofik Maksillada Aynı Anda Sinüs Lift ve Kişiye Özel Titanyum Mesh Uygulaması:Olgu Sunumu ve Literatür Derlemesi

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ÖZET

AMAÇ: Günümüzde implant tedavileri diş eksikliklerini rehabilite etmek açısından oldukça sık kullanılan tedaviler arasında yer almakla birlikte atrofik çenelerde her zaman çözüm sağlayamamaktadır. Bu durumda ideal implant uygulaması yapılabilmesi için yeterli seviyede kemik yüksekliği ve genişliğinin sağlanması amacıyla çeşitli teknikler ve materyaller kullanılmaktadır. Son yıllarda bilgisayar teknolojilerinin ağız, diş ve çene cerrahisinde sıklıkla kullanıma dahil edilmesi ile kişiye özel titanyum meshlerin kemik ogmentasyonda kullanımı yaygınlaşmıştır. Bu olgu sunumunda, kişiye özel titanyum mesh ile aynı seansta sinüs lift uygulaması sunulmuştur.

OLGU SUNUMU: SBÜ Gülhane Diş Hekimliği Fakültesine diş eksikliği sebebiyle başvuran 35 yaşındaki erkek hastada yapılan klinik ve radyografik muayenede sol taraf maxillar posterior bölgede diş eksikliği, ileri derecede kemik atrofisi ve sol maksiller sinüste pnömatizasyon tespit edilmiştir. İmplant uygulanabilmesi için vertikal yönde kemik elde edilebilmesi amacıyla kişiye özel titanyum mesh uygulaması ve aynı anda sinüs lift işlemi yapılmasına karar verilmiştir. Hastanın tomografi verileri işlenip 3D yazıcılarla kişiye özel üretilmiş olan titanyum mesh yardımıyla bölgenin rehabilitasyonu amaçlanmıştır. Geleneksel lateral pencere tekniği ile sinüs lift işlemi gerçekleştirilmiş sonrasında aynı bölgeye vertikal kemik yükseltilmesini sağlamak amacıyla kişiye özel hazırlanmış olan titanyum mesh uygulanmıştır. Bölge primer olarak kapatılmıştır.

SONUÇ: Kişiye özel titanyum meshlerin özellikle vertikal, horizontal ve kombine defektler için yeterli ve güvenli bir kemik artırma tekniği olduğu ve sinüs lift gibi ilave cerrahilerle birlikte de kullanılabileceği gösterilmiştir.

GİRİŞ

Diş çekiminden sonra alveolar krette vertikal ve horizontal yönde kemik miktarında azalmayla sonuçlanan bir yeniden şekillenme süreci meydana gelir. Bu yeniden şekillenme sürecinde meydana gelen alveolar kemik kaybı dental implantların yerleştirilmesini zorlaştırmaktadır**(1)**.

Günümüzde implant tedavileri diş eksikliklerini rehabilite etmek açısından oldukça sık kullanılan tedaviler arasında yer almakla birlikte atrofik çenelerde her zaman çözüm sağlayamamaktadır. Bu durumda ideal implant uygulaması yapılabilmesi için yeterli seviyede kemik yüksekliği ve genişliğinin sağlanması amacıyla çeşitli teknikler ve materyaller kullanılmaktadır. Son yıllarda bilgisayar teknolojilerinin ağız, diş ve çene cerrahisinde sıklıkla kullanıma dahil edilmesi ile kişiye özel titanyum meshlerin kemik ogmentasyonda kullanımı yaygınlaşmıştır**(2,3)**.

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OLGU SUNUMU

SBÜ Gülhane Diş Hekimliği Fakültesine diş eksikliği sebebiyle başvuran 35 yaşındaki erkek hastada yapılan klinik ve radyografik muayenede sol taraf maxillar posterior bölgede diş eksikliği, ileri derecede

kemik atrofisi ve sol maksiller sinüste pnömatizasyon tespit edilmiştir. İmplant uygulanabilmesi için vertikal yönde kemik elde edilebilmesi amacıyla kişiye özel titanyum mesh uygulaması ve aynı anda sinüs lift işlemi yapılmasına karar verilmiştir. Hastanın tomografi verileri işlenip 3D yazıcılarla kişiye özel üretilmiş olan titanyum mesh yardımıyla bölgenin rehabilitasyonu amaçlanmıştır. Geleneksel lateral pencere tekniği ile sinüs lift işlemi gerçekleştirilmiş sonrasında aynı bölgeye hastanın sol taraf mandibula ramus bölgesinden hazırlanmış otojen blok greftten kemik kazıyıcı(**Safescraper® TWIST,META,İtalya**) ile elde edilen otojen partikül greftler(%60) ile sığır kaynaklı partikül xsenojen(**Cerabone®, BOTISS, İsviçre**) grefler(%40) karıştırılıp kişiye özel titanyum mesh içerisine kondanse edilmiştir. Ardından alıcı bölgede dekortikasyon alanları oluşturulduktan sonra önceden işaretlenmiş olan titanyum mesh yuvaları açılmıştır. Alıcı bölgenin hazırlığının bitmesinin ardından greft materyali eklenen titanyum mesh bölgeye 1.4x6 mm çapında fiksasyon vidaları ile uyumlandırılmıştır. Bölgeye uyumlandırılmış titanyum meshin üstü 15x20mm boyutlarında doğal perikardiyum GBR membran(**Jason® membrane, BOTISS, İsviçre)** ve hastanın kanından elde edilen PRF ile kapatılmıştır. Cerrahi saha 4.0 poliprolen sütur materyali ile primer olarak kapatılmıştır. Hastaya işlemden sonra amoksisilin+klavulanik asit (2x1) , NSAİİ (3x1)

, klorheksidin diglukonat (3x1) reçete edilmiştir. Hastanın 1 , 3 ve 6. aylarda postop kontrolleri yapılmıştır.

TARTIŞMA

Maksiller molar dişler bölgesinde ciddi alveolar kemik kaybı olan vakalarda, implantların başarılı olarak yerleştirilmesi ve sağkalım oranlarındaki artışı sağlamak için yeterli miktarda alveolar kemik ogmentasyonu gereklidir. İleri seviyede atrofiye uğramış alveoler kemikte vertikal ogmentasyon yapılmaksızın açık maksiller sinüs lift işlemi uygulanırsa, yapılacak olan implant üstü protezin kron boyu uzunluğu olması gerekenden fazla olabilir, bu da kron-implant oranının 1:1'den fazla olmasına neden olarak alveoler kemiğe ve implant üstü protezlere aktarılan yükü artırır(**4**).

Cowood ve ark. (**5**) rezidüel alveolar kemiğin yetersiz olduğu durumlarda yapılan kemik greftleme işleminin, 3-6 aylık iyileşme periyodunun ardından geç dönem implant uygulaması şeklinde yapıldığında başarı oranının artabileceğini bildirmişlerdir.

Urban ve ark.(**6**) tarafından yapılan çalışmada, sadece vertikal kret ogmentasyonu yapılan vakalar ve vertikal kret ogmentasyonu ile sinüs lift işleminin aynı anda yapıldığı vakalar karşılaştırıldığında, implantların etrafındaki marjinal kemik rezorpsiyonunda ve implantların başarı oranında anlamlı bir fark bulunmamıştır.

Bölgeye eklenen kemik greft materyalinin başarısı, ameliyat için malzeme seçiminden daha önemlidir. Ameliyat sonrası enfeksiyon gelişimi, cerrahi sahanın ağız içine ekspozu ve rezidüel kemik ile greft materyallerinin kemiğe dönüşmesi önemli noktalardır. Greft materyallerinin veya kemik segmentlerinin artan hareketliliği, revaskülarizasyonu engelleyerek bölgede istenen bütünleşmeyi engeller ve bölgeye yerleştirilen kalsifiye materyallerin alveolar kemikle bütünleşmesini zorlaştırır. Bu nedenle, yumuşak doku cerrahisi de kemik greftleme işleminde oldukça önemli bir faktördür ve gerilimsiz bir şekilde cerrahi sahanın kapatılması gerekir. (**7,8**)

Jensen ve arkadaşlarına(**9**) göre, açık maksiller sinüs lift işleminden sonra lateral sinüs penceresinin bariyer membran ile kapatılması yumuşak doku penetrasyonunu önler ve greft materyalinin hareketliliğini azaltır, bu sayede iyi kemik oluşumu sağlanır ve implantların başarısı artırılır.

Kang ve ark. (**10**) ileri derecede atrofik maksiller molar bölgelerde açık maksiller sinüs lift ve vertikal kret ogmentasyonu eş zamanlı olarak uygulandığında, düşük implant başarısı ve sağkalım oranı ile birlikte postoperatif komplikasyonlar yüksek olma eğilimindedir. Gecikmiş implant yerleştirmenin, kemik grefti sonrası iyi kemik oluşumu için 8 ay ila 12 aylık yeterli iyileşmeye izin vererek iyi prognozla sonuçlanacağı düşünülmektedir.

SONUÇ:

Kişiye özel titanyum meshlerin özellikle vertikal, horizontal ve kombine defektler için yeterli ve güvenli bir kemik artırma tekniği olduğu ve sinüs lift gibi ilave cerrahilerle birlikte de kullanılabileceği gösterilmiştir.

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[OP-071]

REVİEW OF ACUTE OROANTRAL COMMUNİCATİON TREATMENT AND AN ALTERNATİVE THERAPEUTİC APPROACH

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Abstract
Introduction: Extraction of maxillary posterior teeth, failed implant procedures in atrophic posterior maxilla, cyst and tumor excision, and dental infections can lead to an acute or chronic communication between the oral cavity and the maxillary sinus. Various surgical methods are used to close these communications. This presentation will provide a brief review of the closure of acute oroantral communications and present a case where an oroantral communication was closed using an immediate implant.
Case Presentation: A 20-year-old systemically healthy male patient presented to our clinic for the treatment of tooth number 15. Clinical and radiographic examination revealed a vertical fracture in the tooth, indicating the need for extraction. The panoramic radiograph showed that the apical portion of the tooth was in relation with the maxillary sinus. After the extraction, a 1 mm oroantral communication was formed. The communication was closed using an immediate implant, and the wound site was primarily closed.
Conclusion: Different surgical treatments may be applied for closing oroantral communications (OACs) depending on the size of the opening, the presence of infection, and whether the patient is considering future dental implant treatment. Dental implants can be used as a sterile plug to close acute and small communications. Closing OACs with immediate implant placement will shorten the treatment duration.

Keywords: maxillary sinus, oroantral communication, surgical repair techniques

6. INTRODUCTİON

Oroantral communication (OAC) is an opening that forms between the maxillary sinus and the oral cavity. This condition can occur due to factors such as extraction of maxillary posterior teeth, dental infections, osteomyelitis, orthognathic surgery, excision of cysts and tumors, or implant failures and placements in atrophic posterior maxilla (1). Different surgical techniques may be preferred depending on the size of the communication, the presence or absence of infection in the area, and the depth of the vestibular sulcus (1). If OAC is not treated with appropriate methods, an epithelialized tract may develop, leading to an oroantral fistula (OAF) (1). This presentation will provide a brief review of the closure of acute oroantral communications and present a case where an oroantral communication was closed using immediate implant placement.

7. CASE PRESENTATİON

A 20-year-old, systemically healthy male patient presented to our clinic for the treatment of his tooth number 15. Clinical and radiographic examination revealed a vertical crown fracture in the tooth. Extraction was indicated for the tooth. The radiological images showed that the root apex of the tooth was related to the maxillary sinus (Figure 1). There was no mucosal thickening in the sinus. Following the tooth extraction, an oroantral communication (OAC) of approximately 1 mm in size developed (Figure 2). Since the opening was small and there were no signs of infection in the area, the oroantral communication was treated with immediate dental implant placement. A 4.1x10 mm Nucleoos (Şanlılar Tıbbi Cihazlar Medical Kimya San Tic Ltd Şti, İzmir, Turkey) brand implant was placed in the area (Figure 3). As there was a gap smaller than 2 mm between the extraction socket and the implant surface, no graft was applied (Figure 4). The area was primarily closed with a buccal advancement flap. The patient was prescribed postoperative amoxicillin/clavulanic acid (Augmentin BID, 1 g), dexketoprofen trometamol (Arveles®, 25 mg), cetirizine (Zyrtec®, 10 mg), and chlorhexidine (Kloroben gargle). Upon returning for a follow-up

appointment one week later, the patient reported nasal discharge. Cone beam computed tomography (CBCT) images taken for follow-up showed mucosal thickening in the sinus (Figure 5). The patient continued to use the same medications for an additional 7 days. In the third month, CBCT images revealed that the mucosal thickening in the sinus had healed and there was complete bone healing around the implant.

8. DİSCUSSİON AND REVİEW OF LİTERATURE

The most common cause of oroantral communication (OAC) formation, accounting for approximately 80%, is the extraction of maxillary molar and premolar teeth (2,3). These tooth roots are in close proximity to the maxillary sinus. In addition to tooth extraction, OAC can also result from factors such as tuberosity fractures, periapical infections of molar teeth, displacement of implants into the maxillary sinus, trauma (7.5%), the presence of maxillary cysts or tumors (18.5%), flap necrosis, and dehiscence following implant failure (4). Literature indicates that not all OACs require surgical treatment; openings smaller than 3 mm may close spontaneously with blood clot formation, while openings larger than 3 mm generally require surgical intervention (2). However, for openings smaller than 3 mm, materials such as absorbable gelatin sponge can be placed to facilitate clot stabilization, and sutures can be applied, or mechanical barriers such as reimplantation or immediate implant placement can be used (1,2,5). Allowing the openings to heal spontaneously may lead to acute sinus infection or fungal infections due to food and saliva contamination (2,5). When the openings are closed immediately, the success rate is reported to be 95% or higher (2). Therefore, in the case we present, we chose to treat the acute oroantral communication with immediate dental implant placement, thus creating a mechanical barrier and also providing treatment for the patient's tooth loss. For successful closure, factors such as the absence of infection in the area, adequate nasal drainage, and healthy, non-tensioned soft tissue coverage are essential (2). Otherwise, the opening may evolve into a chronic condition, leading to the formation of an oroantral fistula (OAF) (5). In treating OACs, factors such as the clinician's experience, timing of diagnosis, size of the opening, infection status, vestibular sulcus depth, existing tissue quantity and quality, and the potential for future dental implant placement should be considered (5). In the absence of infection in the maxillary sinus or foreign objects in the antrum, using alloplastic or biological materials or immediate implantation is generally indicated for closing OACs with a diameter of 3-4 mm (6,7). Indeed, in the case we presented, an immediate dental implant was successfully used for oroantral closure because the opening was small and there were no signs of infection. For patients considering future implants, if sufficient bone for primary stability is not available, placing a collagen membrane in the area and then applying allograft followed by covering with a resorbable membrane using the Sandwich technique can also yield successful results. This technique provides both bone and soft tissue closure, unlike local flap procedures that only achieve soft tissue closure (8). For acute openings larger than 3 mm, various procedures have been used, including soft tissue flap applications, bone grafts with sinus elevation, and platelet-rich fibrin (9-12). The preferred surgical procedures include the buccal advancement flap described by Rehrmann (13), the buccal fat pad (BFP) introduced by Egyedi (14), and the palatal pedicle flap designed by Ashley (15). Using a single flap carries a risk of recurrence; therefore, a double-layer closure procedure using multiple flaps may also be preferred. If the opening is large and close to the palatal region, the buccal advancement flap may not be sufficient. Moreover, the use of the buccal advancement flap may lead to a reduction in the depth of the buccal vestibule, which can negatively impact the patient's use of prosthetics in the future (5). The palatal flap is more suitable for closing openings in the premolar region; however, applying it to the molar region can cause excessive tension and ischemia leading to necrosis (5,6). The combination of the BFP with the buccal advancement flap has shown better results (5). In the case report we presented, there was a gap of less than 2 mm around the implant due to the difference in shape between the tooth root and the implant. To avoid food contamination, infection around the implant, and the development of OAF, we chose to use a buccal advancement flap for primary closure around the implant.

9. CONCLUSİON

Different surgical treatments may be applied for closing oroantral communications (OACs) depending on the size of the opening, the presence of infection, and whether the patient is considering future dental implant treatment. Dental implants can be used as a sterile plug to close acute and small communications. Closing OACs with immediate implant placement will shorten the treatment duration.

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FİGURES

Figure 1: Preoperative orthopantomography

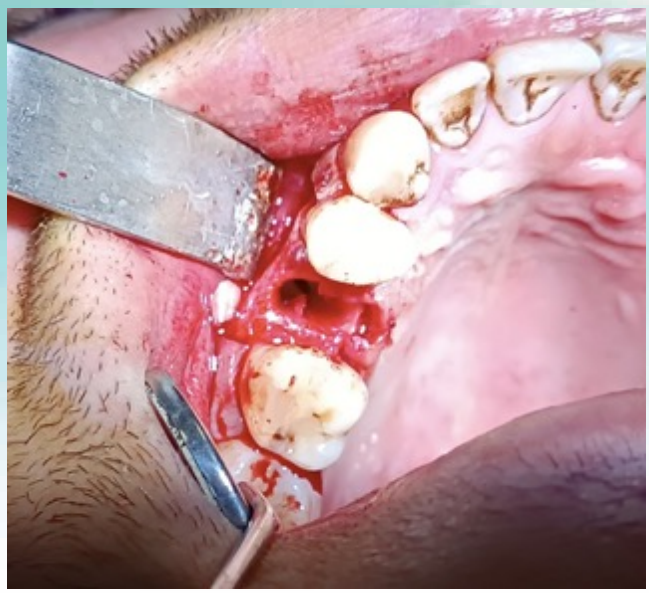

Figure 2: Oroantral communication after tooth extraction

Figure 3: Postoperative orthopantomography

Figure 4: Closing the oroantral communication with a dental implant

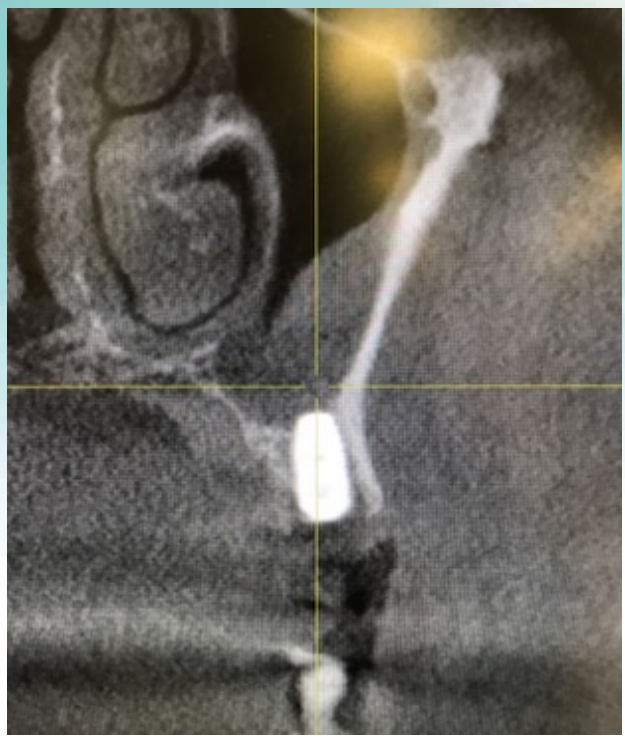

Figure 5: Thickening of the sinus mucosa 1 week after surgery

[OP-074]

Fibrous Dysplasia in Mandible and Maxilla: Case Report

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ABSTRACT

Introduction: It is a defect in the transformation of primitive bone into mature lameller bone during development in the womb. There are immature bone trabeculae within the dysplastic fibrous tissue and mineralization does not occur here. It generally occurs in female patients. The lesions are generally painless, well-contoured, and hard swelling-like. Maxilla lesions are more homogeneous than mandible lesions. Although they spread mostly in healthy bone, they also push the lateral wall of the maxillary sinus. It is most common in the jaws (mostly in the maxilla) in the head and neck region. It occurs in two forms: monostatic and polyostatic. It is associated with McCune Albright syndrome and Jaffe-Lichtenstein syndrome. Fibrous dysplasia gives a low-density radiopaque appearance on x-ray, resembling an 'orange peel', 'fingerprint' or 'frosted glass'. Its borders are unclear and the surrounding area ends up blending into normal bone. They are included in the classification of fibroosseous lesions and are unencapsulated.

Case Report: A 63-year-old female patient was admitted to our faculty clinic complaining of swelling in the right posterior maxilla, a 52-year-old female patient was complaining of pain in the anterior mandible, and a 48-year-old female patient was admitted to our faculty clinic complaining of swelling and pain in the right posterior maxilla. There were no systemic contraindications in the patients. During the intraoral examinations, the patients had pain accompanied by swelling. Then cone beam computed tomography was used. Axial and sagittal sections showed intact bone and continuous expansion. An incisional biopsy was performed on two of the patients, and an excisional biopsy was performed on the other patient because it accompanied the roots of the teeth in the anterior mandible and was painful, and the area was curetted. After histopathological examinations, it was determined that it was fibrous dysplasia. In patients who underwent incisional biopsy under local anesthesia, contour correction was performed in the area. Then the area was closed primarily. The patient was followed for periods ranging from 6 months to 1 year. No complaints or recurrences were observed during post-operative follow-up.

Conclusion: No problems were encountered during the follow-up of the patients. In addition, even if the chances of recurrence are low, follow-up should be done for at least 6 months.

Keywords: Fibrous dysplasia, enucleation, currettage, mandible, maxilla, biopsy

INTRODUCTION

It is a defect in the transformation of primitive bone into mature lamellar bone during development in the womb. There are immature bone trabeculae within the dysplastic fibrous tissue and mineralization does not occur here.

It generally occurs in female patients. The lesions are generally painless, smooth-contoured, and hard swelling-like. Fibrous dysplasia gives a low-density radiopaque appearance on x-ray, resembling an 'orange peel', 'fingerprint' or 'frosted glass'. Its borders are unclear.

CASE REPORT

A 63-year-old female patient was admitted to our faculty clinic complaining of swelling in the right posterior maxilla, a 52-year-old female patient was complaining of pain in the anterior mandible, and a 48-year-old female patient was admitted to our faculty clinic complaining of swelling and pain in the right posterior maxilla. There were no systemic contraindications in the patients. There were no signs of lymphadenopathy or fever. During the intraoral examinations, the patients had pain accompanied by swelling. Then cone beam computed tomography was used. Axial and sagittal sections showed intact bone and continuous expansion. An incisional biopsy was performed on two of the patients, and an excisional biopsy was performed on the other patient because it accompanied the roots of the teeth in the anterior mandible and was painful, and the area was curetted. After histopathological examinations, it was determined that it was fibrous dysplasia. In patients who underwent incisional biopsy under local anesthesia, contour correction was performed in the area after the specimen was taken. Then the area was closed primarily. Patients were prescribed 1000 mg amoxicillin + clavunalic acid twice a day, 50 mg dextetoprofen tremetamol twice a day, and chlorhexidine gluconate three times a day. The patient was followed for periods ranging from 6 months to 1 year. No complaints or recurrences were observed during post-operative follow-up.

DISCUSSION

Fibrous dysplasia, first described by Lihtenstein and Jaffe in 1938, is a localized, benign developmental bone disease of unknown etiology, characterized by the replacement of healthy bone with weak and poorly organized fibroosseous tissue. Reed characterizes the condition as "arrest of bone maturation in ossified bone caused by nonspecific fibro-osseous metaplasia." Schlumberger described the disease process as "monostotic fibrous dysplasia" when it initially involved a single bone.

FD accounts for approximately 2.5% of all bone lesions and 7% of benign bone tumors and has an incidence prevalence of 1:4000-1:10,000. In monostotic FD, the femur, tibia, ribs, calvarium, skull base, and orofacial bones such as zygoma, maxilla, and mandible are frequently affected. Among the jaw bones, the maxilla is affected more frequently than the mandible in 50% of patients. Due to estrogen receptors identified in FD, female patients experience high pain levels during pregnancy and the menstrual cycle.

Methods used in the examination of FD include conventional radiography, computed tomography (CT), magnetic resonance imaging (MRI) and bone scintigraphy. The radiographic features of FD vary depending on the ratio of fibrous tissue to mineralized bone in the lesion. Spontaneous malignant transformation of FD is extremely rare, occurring with incidences as low as 0.93%, which includes mesenchymal malignant tumors such as osteosarcomas, fibrosarcomas, and chondrosarcomas. Patients with polyostotic FD are more likely to experience malignant transformation compared to patients with monostotic FD. There is currently no treatment available to prevent disease progression or malignant transformation. The only treatment for FD is to maintain the optimal density of bones through nutrition, physical activity, and therapeutic medications. Recommended treatment includes: observation, medical intervention, surgery (iv) radical resection and reconstruction. Small lesions may not require any treatment other than periodic follow-up.

Large lesions that cause cosmetic or functional deformity require surgical intervention. However, surgery should be avoided until the patient reaches puberty. Surgical intervention causes loss or significant alteration of the normal anatomical features of the oral and facial structures, which creates significant cosmetic, physiological and psychological deficits in the patient to varying degrees. The adoption of bisphosphonates as a treatment has resulted from a better understanding of the etiology of this disease.

It inhibits osteoclast activity by specifically binding to bone surfaces undergoing active resorption and serves as a biochemical barrier against bone resorption. Posnick and Costello recommended lifelong continuous monitoring for FD. Recurrence of FD is rare in adults but more common during adolescence. Although the prognosis for FD is positive, there is a risk of malignant transformation. The possibility that the lesion will recur or continue to grow requires long-term follow-up.

CONCLUSION

Although many theories have been put forward, the etiology of the disease is not fully known. Fibrous dysplasia is a form of fibroosseous lesions affecting the maxillofacial region. It generally occurs in female patients. It is an asymptomatic bone disorder that is painless and usually accompanied by swelling.

Although the prognosis for FD is positive, there is a risk of malignant transformation. No problems were encountered in the annual follow-up of the patients in our case. In addition, no matter how low the chances of recurrence are, follow-up should be done for at least 6 months.

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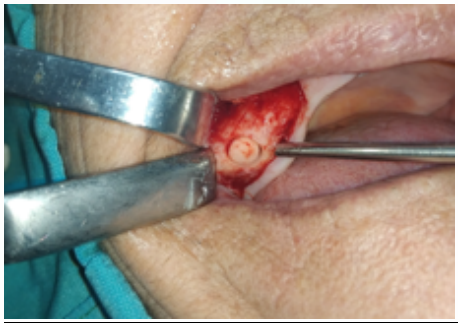
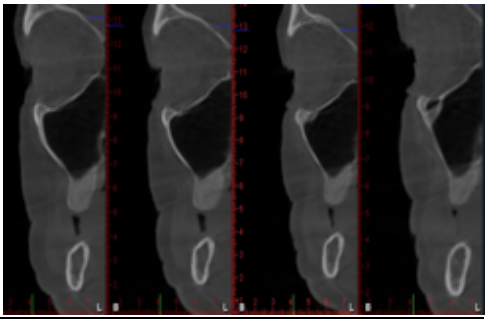
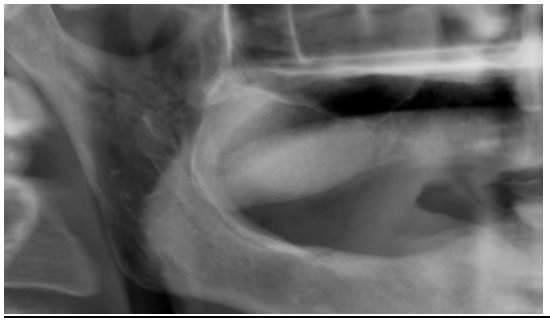
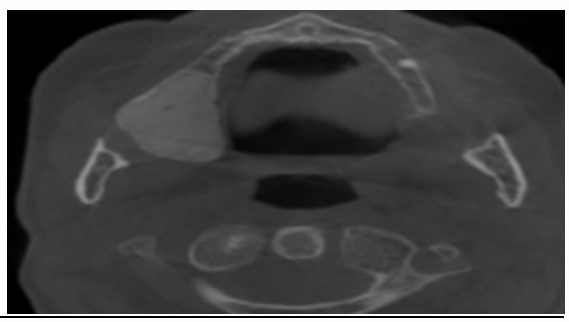

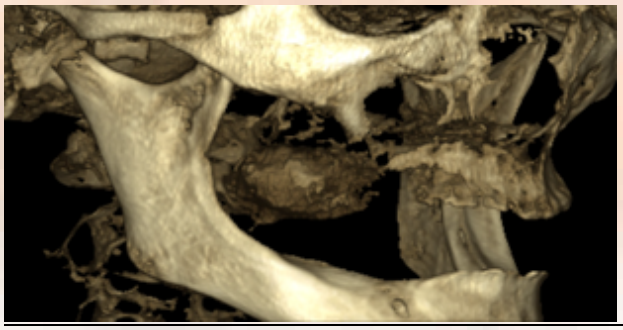


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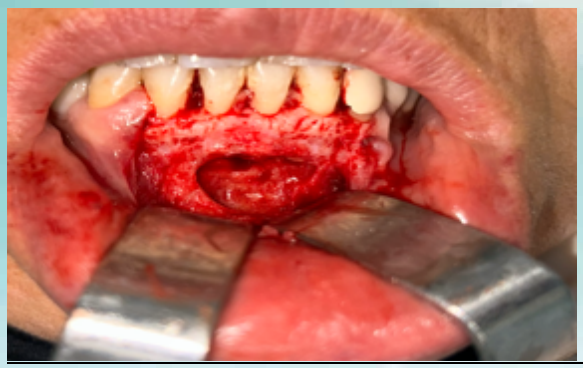

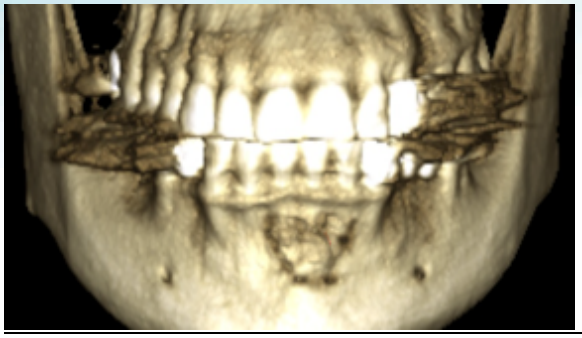
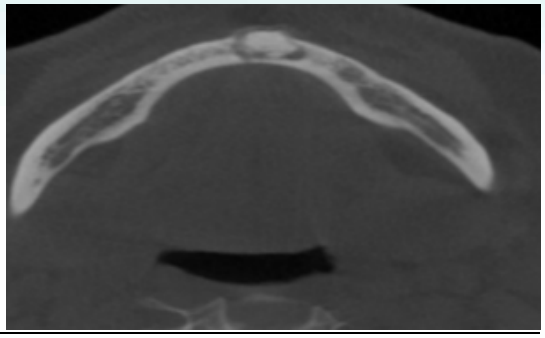
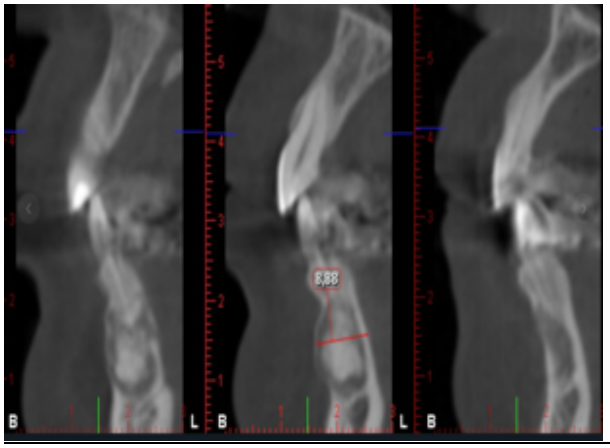
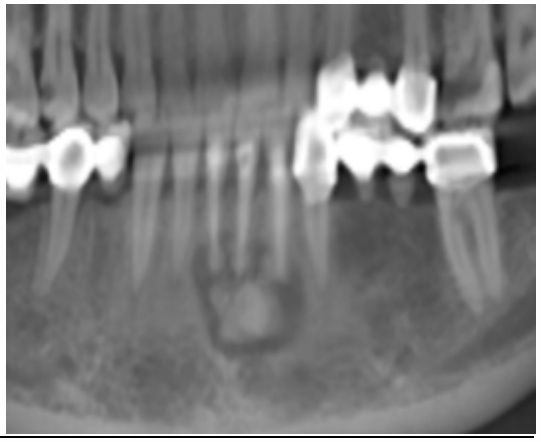

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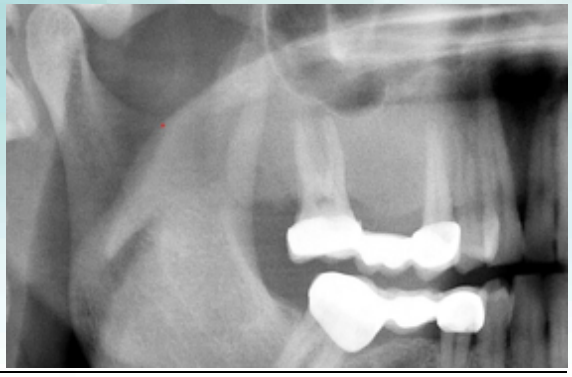
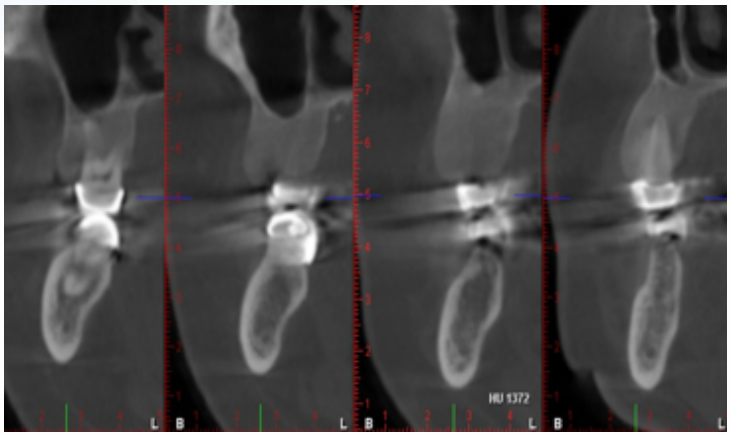

Mandibula ve Maksillada Fibröz Displazi: Olgu Sunumu

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OZET

Giriş: Anne karnında gelişim esnasında primitif kemiğin, matür lameller kemiğe dönüşüm defektidir. Displastik fibröz doku içinde immatür kemik trabekülleri vardır ve burada mineralizasyon oluşmaz. Genelde kadın hastalarda meydana gelir. Lezyonlar genelde ağrısız, düzgün konturlu, sert şişlik tarzındadır. Maksilla lezyonları mandibula lezyonlarına göre daha homojendir. Daha çok sağlam kemikte yayılım göstermekle beraber maksiller sinüsün lateral duvarını da iterler. Baş boyun bölgesinde en fazla çenelerde(daha çok maksillada) görülür. Monostatik ve poliostatik olmak üzere iki formda ortaya çıkar. McCune Albright sendromu ve Jaffe-Lichtenstein sendromu ile ilişkilidir. Fibröz displazi röntgende 'portakal kabuğu', 'parmak izi' veya 'buzlu cam' benzetmesi yapılan, düşük dansiteli radyoopakt görüntü verir. Sınırları belirsizdir ve çevre normal kemiğe karışarak sonlanır. Fibroosseöz lezyonların sınıflamasında yer alıp kapsülsüzdürler.

Vaka Raporu: Fakülte kliniğimize maksilla sağ posteriorda şişlik şikayeti ile 63 yaşındaki kadın hasta, mandibula anteriorda ağrı şikayeti ile 52 yaşındaki kadın hasta ve yine maksilla sağ posteriorda şişlik ve ağrı nedeniyle 48 yaşındaki kadın hasta başvurmuştur. Hastalarda herhangi bir sistemik kontrendikasyon yoktu. Yapılan intraoral muayenelerde hastalarda şişliğe eşlik eden ağrılar mevcuttu. Ardından konik ışınlı bilgisayarlı tomografiye başvuruldu. Aksiyal ve sagittal kesitlerde sağlam kemik ile devamlı seyreden ekspansiyon görüldü. Hastalardan ikisine insizyonel biyopsi, diğer hastaya ise mandibula anteriorda dişlerin köklerine eşlik edip ağrılı olduğu için eksizyonel biyopsi yapılarak bölge kürete edildi. Yapılan histopatolojik incelemeler sonrasında fibröz displazi olduğu tespit edildi. Lokal anestezi altında insizyonel biyopsi yapılan hastalarda spesimen alındıktan sonra bölgede kontur düzeltilmesi yapıldı. Ardından bölge primer kapatıldı. Hasta 6 ay ile 1 yıl arasında değişen sürelerde takip altına alındı. Post-operasyon takiplerinde herhangi bir şikayet ve nüks gözlemlenmedi.

Sonuç: Hastaların yıllık takiplerinde herhangi bir sorun ile karşılaşılmadı. Ayrıca nüks ihtimalleri ne kadar az da olsa en az 6 ay takibi yapılmalıdır.

Anahtar Kelimeler: Fibröz displazi, enükleasyon, küretaj, mandibula, maksilla, biyopsi

ABSTRACT

Introduction: It is a defect in the transformation of primitive bone into mature lameller bone during development in the womb. There are immature bone trabeculae within the dysplastic fibrous tissue and mineralization does not occur here. It generally occurs in female patients. The lesions are generally painless, well-contoured, and hard swelling-like. Maxilla lesions are more homogeneous than mandible lesions. Although they spread mostly in healthy bone, they also push the lateral wall of the maxillary sinus. It is most common in the jaws (mostly in the maxilla) in the head and neck region. It occurs in two forms: monostatic and polyostatic. It is associated with McCune Albright syndrome and Jaffe-Lichtenstein syndrome. Fibrous dysplasia gives a low-density radiopaque appearance on x-ray, resembling an 'orange peel', 'fingerprint' or 'frosted glass'. Its borders are unclear and the surrounding area ends up blending into normal bone. They are included in the classification of fibroosseous lesions and are unencapsulated.

Case Report: A 63-year-old female patient was admitted to our faculty clinic complaining of swelling in the right posterior maxilla, a 52-year-old female patient was complaining of pain in the anterior mandible, and a 48-year-old female patient was admitted to our faculty clinic complaining of swelling and pain in the right posterior maxilla. There were no systemic contraindications in the patients. During the intraoral examinations, the patients had pain accompanied by swelling. Then cone beam computed tomography was used. Axial and sagittal sections showed intact bone and continuous expansion. An incisional biopsy was performed on two of the patients, and an excisional biopsy was performed on the other patient because it accompanied the roots of the teeth in the anterior mandible and was painful, and the area was curetted. After histopathological examinations, it was determined that it was fibrous dysplasia. In patients who underwent incisional biopsy under local anesthesia, contour correction was performed in the area. Then the area was closed primarily. The patient was followed for periods ranging from 6 months to 1 year. No complaints or recurrences were observed during post-operative follow-up.

Conclusion: No problems were encountered during the follow-up of the patients. In addition, even if the chances of recurrence are low, follow-up should be done for at least 6 months.

Keywords: Fibrous dysplasia, enucleation, currettage, mandible, maxilla, biopsy

GIRIŞ

Anne karnında gelişim esnasında primitif kemiğin, matür lameller kemiğe dönüşüm defektidir. Displastik fibröz doku içinde immatür kemik trabekülleri vardır ve burada mineralizasyon oluşmaz.

Genelde kadın hastalarda meydana gelir. Lezyonlar genelde ağrısız, düzgün konturlu, sert şişlik tarzındadır. Fibröz displazi röntgende 'portakal kabuğu', 'parmak izi' veya 'buzlu cam' benzetmesi yapılan, düşük dansiteli radyoopakt görüntü verir. Sınırları belirsizdir.

OLGU SUNUMU

Fakülte kliniğimize maksilla sağ posteriorda şişlik şikayeti ile 63 yaşındaki kadın hasta, mandibula anteriorda ağrı şikayeti ile 52 yaşındaki kadın hasta ve yine maksilla sağ posteriorda şişlik ve ağrı nedeniyle 48 yaşındaki kadın hasta başvurmuştur. Hastalarda herhangi bir sistemik kontrendikasyon yoktu. Lenfadenopati ve ateş bulgularına rastlanmadı. Yapılan intraoral muayenelerde hastalarda şişliğe eşlik eden ağrılar mevcuttu. Ardından konik ışınlı bilgisayarlı tomografiye başvuruldu. Aksiyal ve sagittal kesitlerde sağlam kemik ile devamlı seyreden ekspansiyon görüldü. Hastalardan ikisine insizyonel biyopsi, diğer hastaya ise mandibula anteriorda dişlerin köklerine eşlik edip ağrılı olduğu için eksizyonel biyopsi yapılarak bölge kürete edildi. Yapılan histopatolojik incelemeler sonrasında fibröz displazi olduğu tespit edildi. Lokal anestezi altında insizyonel biyopsi yapılan hastalarda spesimen alındıktan sonra bölgede kontur düzeltilmesi yapıldı. Ardından bölge primer kapatıldı. Hastalara 1000 mg amoksisilin+klavunalik asit günde 2 kere, 50 mg dekstetoprofen trametamol günde 2 kere ve klorheksidin glukonat günde 3 kere kullanılmak üzere reçete edildi. Hasta 6 ay ile 1 yıl arasında değişen sürelerde takip altına alındı. Post-operasyon takiplerinde herhangi bir şikayet ve nüks gözlemlenmedi.

TARTIŞMA

Fibröz displazi, ilk kez 1938'de Lihtenstein ve Jaffe tarafından tanımlanmış, sağlıklı kemiğin yerini zayıf ve kötü organize olmuş fibroosseoz dokunun almasıyla karakterize, lokalize, iyi huylu, etiyolojisi bilinmeyen gelişimsel bir kemik hastalığıdır. Reed, durumu "nonspesifik fibro-osseöz metaplazinin neden olduğu ossifikasyonla dokunmuş kemikte kemik olgunlaşmasının durması" olarak nitelendiriyor. Schlumberger, başlangıçta tek bir kemiği içerdiğinde hastalık sürecini "monostotik fibröz displazi" olarak tanımladı.

FD tüm kemik lezyonlarının yaklaşık %2,5'ini ve iyi huylu kemik tümörlerinin %7'sini oluşturur ve 1:4000-1:10.000 insidans prevalansı vardır. Monostotik FD'de femur, tibia, kaburgalar, kalvaryum, kafa tabanı ve orofasiyal kemiklerde zigoma, maksilla ve mandibula sıklıkla etkilenir. Hastaların %50'sinde çene kemikleri arasında maksilla, mandibuladan daha sık etkilenir. FD'de tanımlanan östrojen reseptörleri nedeniyle, kadın hastalarda hamilelik ve adet döngüsü sırasında yüksek ağrı seviyeleri görülür.

FD incelemesinde kullanılan yöntemler arasında konvansiyonel radyografi, bilgisayarlı tomografi (BT), manyetik rezonans görüntüleme (MRI) ve kemik sintigrafisi yer alır. FD'nin radyografik özellikleri, lezyondaki fibröz doku ile mineralize kemik oranına bağlı olarak değişir. FD'nin kendiliğinden kötü huylu dönüşümü son derece nadirdir ve osteosarkomlar, fibrosarkomlar ve kondrosarkomlar gibi mezenkimal kötü huylu tümörleri içeren %0,93 kadar düşük insidanslarla görülür. Poliostotik FD'li hastalarda, monostotik FD'li hastalara kıyasla kötü huylu dönüşüm görülme olasılığı daha yüksektir. Hastalığın ilerlemesini veya kötü huylu dönüşümü önlemek için şu anda mevcut bir tedavi yoktur. FD için tek tedavi, beslenme, fiziksel aktivite ve terapötik ilaçlarla kemiklerin optimum yoğunluğunu korumaktır. Önerilen tedavi şunları içerir: Gözlem, tıbbi müdahale, cerrahi (iv) radikal rezeksiyon ve rekonstrüksiyon. Küçük lezyonlar periyodik takip dışında herhangi bir tedavi gerektirmeyebilir.

Kozmetik veya işlevsel deformiteye neden olan büyük lezyonlar cerrahi müdahale gerektirir. Ancak, hasta ergenliğe ulaşana kadar ameliyattan kaçınılmalıdır. Cerrahi müdahale, hastanın çeşitli derecelerde önemli kozmetik, fizyolojik ve psikolojik eksiklikler yaratan, ağız ve yüz yapılarının normal anatomik özelliklerinin kaybına veya önemli ölçüde değişmesine neden olur. Bifosfonatların bir tedavi olarak benimsenmesi, bu hastalığın etiyolojisinin daha iyi anlaşılmasından kaynaklanmıştır.

Özellikle aktif rezorpsiyona uğrayan kemik yüzeylerine bağlanarak osteoklast aktivitesini inhibe eder ve kemik rezorpsiyonuna karşı biyokimyasal bir bariyer görevi görür. Posnick ve Costello, FD için yaşam boyu sürekli takip önermiştir. FD'nin tekrarlaması yetişkinlerde nadirdir ancak ergenlik döneminde daha yaygındır. FD için prognoz olumlu olsa da, kötü huylu dönüşüm riski vardır. Lezyonun tekrarlama veya büyümeye devam etme olasılığı uzun vadeli bir takibi gerektirir.

SONUÇ

Birçok teori ileri sürülmesine rağmen hastalığın etiyolojisi tam olarak bilinmemektedir. Fibröz displazi, fibroosseoz lezyonların maksillofasiyal bölgeyi etkileyen bir formudur. Genelde kadın hastalarda meydana gelir. Ağrısız ve genellikle şişliğin eşlik ettiği asemptomatik kemik rahatsızlığıdır.

FD için prognoz olumlu olsa da, kötü huylu dönüşüm riski vardır. Vakamızdaki hastaların yıllık takiplerinde herhangi bir sorun ile karşılaşılmadı. Ayrıca nüks ihtimalleri ne kadar az da olsa en az 6 ay takibi yapılmalıdır.

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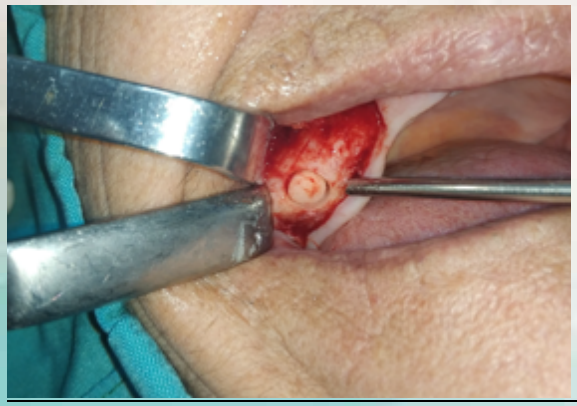
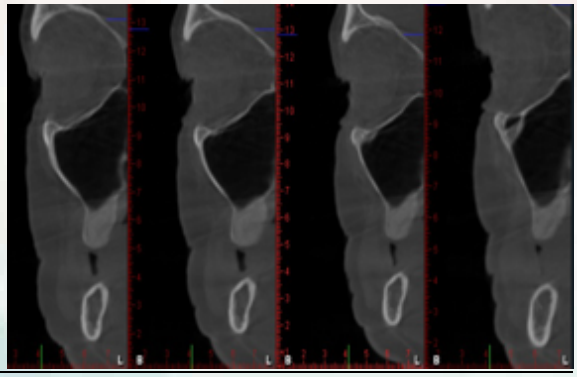
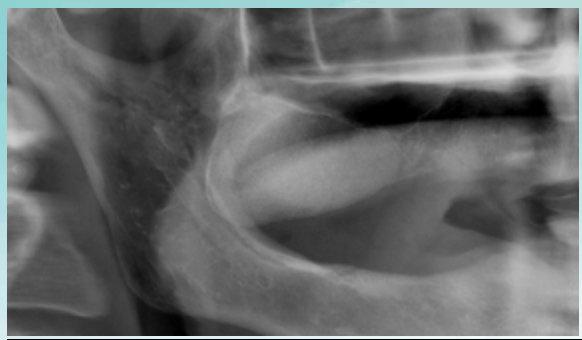
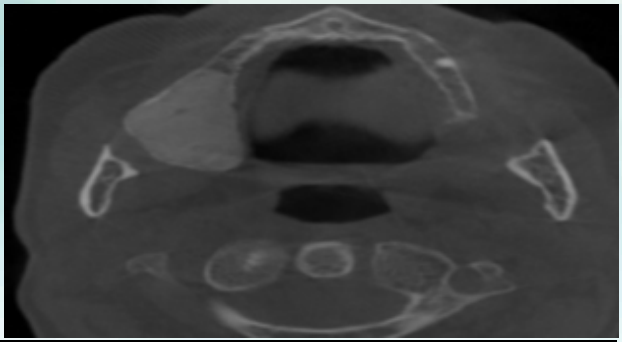
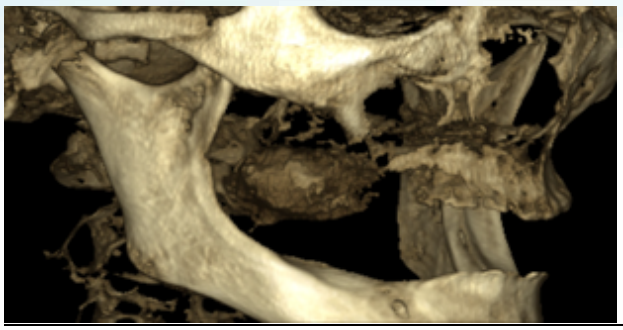


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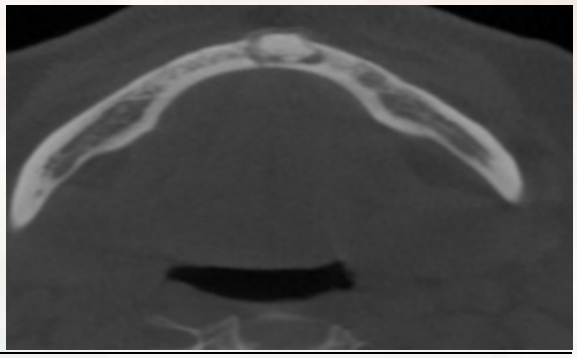

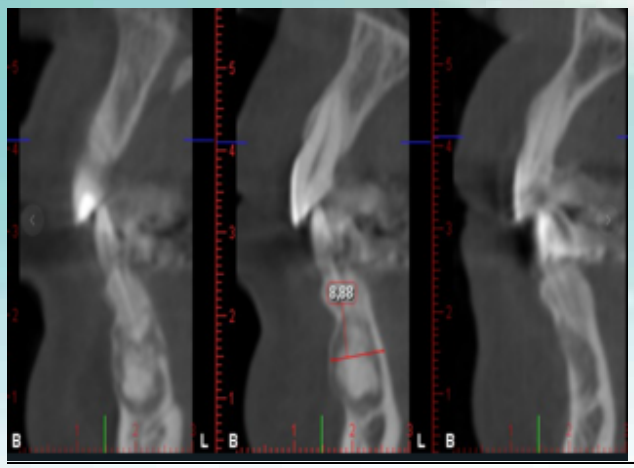
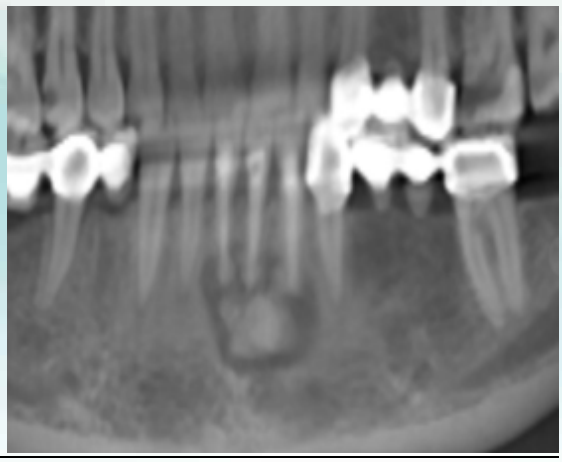

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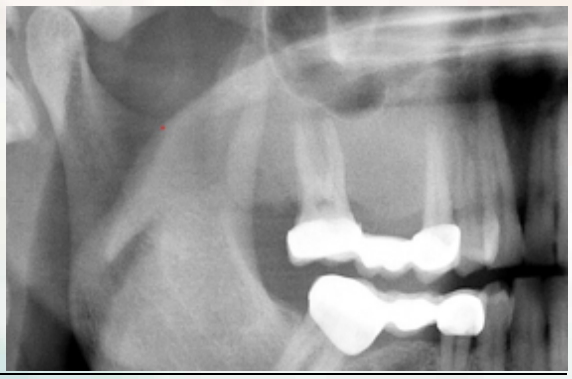

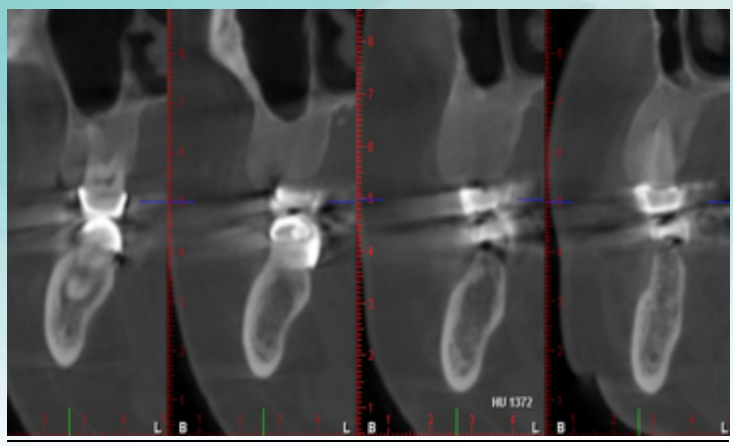
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MRONJ TEDAVİSİNDE SEKESTREKTOMİ: VAKA DERLEMESİ

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ÖZET

GİRİŞ: Bifosfonatların, antirezorptif ilaçların ve antianjiojenik ilaçların etkisiyle çenelerde görülen osteonekrozlar diş hekimliği alanında ciddi sorunlara yol açmaktadır. Daha önce baş ve boyun bölgesinden radyoterapi tedavisi görmemiş, antirezorptif ve antianjiojenik ilaç tedavisi almış ya da aktif olarak tedavi olan hastaların çenelerinde 8 haftadan daha uzun süredir intraoral veya ekstraoral fistüllerle beraber görülebilen mukozada açığa çıkan iyileşmemiş kemik görüntüsü MRONJ olarak tanımlanmıştır.

VAKA DERLEMESİ: Günümüzde MRONJ'un tedavisinde erken cerrahi yaklaşım ön plana çıkmaktadır. Çoğu protokolde etkilenen kemik ortadan kaldırılır ve kemik kenarları yuvarlatılır. Defekt bukkal yağ flabiyle çok katmanlı olarak kapatılır.
Fakültemize başvuran ; 65 yaşında kadın hasta sağ ve sol mandibulada ,63 yaşında kadın hasta sol mandibulada ,59 yaşında kadın hasta sağ mandibulada ağrı şikayetiyle ve 75 yaşında erkek hasta mandibulada ve maksillada ağrı şikayetiyle başvurmuştur. Alınan tıbbi anamnezler ve ağız içi muayeneler sonucu MRONJ düşünülen hastalardan cbct istenmiştir. 59 yaşındaki hasta lokal anestezi altında geriye kalan hastalar genel anestezi altında operasyona alınmıştır. Nekroze sekestr halindeki kemikler sağlıklı kemiğe kadar rezeke edilip ilgili dişler ve implantlar sökülmüştür. Yara bölgeleri bukkal kaydırma flabi veya bukkal yağ doku kaydırılarak flabin ortalarına yük taşıyan süturlar atılarak flabin ucunda gerilim oluşması engellenmiştir . Sonuç olarak flap katmanlı olarak gerilimsiz kapatılmıştır.

SONUÇLAR: AAOMS'un 2022'deki MRONJ rehberine göre erken cerrahi tedavi ön plana çıkmaktadır. Kliniğimizde de benzer bir yaklaşım sergilenen hastaların operasyondan 2 hafta sonra yumuşak doku iyileşmelerini tamamlandığı ; 2 ay , 6 ay ve 1 yıllık takiplerde herhangi bir rekürrens görülmediği belirlenmiştir.

ANAHTAR KELİMELER: Aronj, Sekestrektomi, Bukkal Yağ Pedi

SEQUESTRECTOMY IN THE TREATMENT OF MRONJ: CASE REVIEW

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ABSTRACT

INTRODUCTION: Osteonecrosis of the jaws caused by bisphosphonates, antiresorptive drugs and antiangiogenic drugs causes serious problems in dentistry. MRONJ is defined as the appearance of unhealed bone exposed in the mucosa with intraoral or extraoral fistulas for more than 8 weeks in the jaws of patients who have not been treated with radiotherapy, have received antiresorptive and antiangiogenic drug treatment, or are actively treated in the head and neck region.

CASE REVIEW: A 65 years old female patient presented to our faculty with pain in the right and left mandible, a 63 years old female patient presented with pain in the left mandible, a 59 years old female patient presented with pain in the right mandible, and a 75 years old male patient presented with pain in the mandible and maxilla. As a result of the medical history and intraoral examinations, cbct was requested from the patients who were thought to have MRONJ. The 59 years old patient was operated under local anesthesia and the remaining patients were operated under general anesthesia. Necrotic sequestered bones were resected up to healthy bone and the related teeth and implants were removed. Flap was closed in layers without tension.

CONCLUSIONS: According to the AAOMS MRONJ guidelines in 2022, early surgical treatment is emphasized. In our clinic, a similar approach was taken and soft tissue healing was completed 2 weeks after the operation; no recurrence was observed at 2 months, 6 months and 1 year follow-up.

KEYWORDS: Aronj, Sequestrectomy, Buccal Fat Pad

GİRİŞ:

Bifosfonatların, antirezorptif ilaçların ve antianjiojenik ilaçların etkisiyle çenelerde görülen osteonekrozlar diş hekimliği alanında ciddi sorunlara yol açmaktadır. Daha önce baş ve boyun bölgesinden radyoterapi tedavisi görmemiş, antirezorptif ve antianjiojenik ilaç tedavisi almış ya da aktif olarak tedavi olan hastaların çenelerinde 8 haftadan daha uzun süredir intraoral veya ekstraoral fistüllerle beraber görülebilen mukozada açığa çıkan iyileşmemiş kemik görüntüsü MRONJ olarak tanımlanmıştır.

- Evre 0 : ekspoze kemik yok. Ağrı şişlik olabilir . Nonperiodontal diş kayıpları vardır. Kemik kaybı mevcuttur. Periodontal ligamentte kalınlaşma veya incelme olabilir.
- Evre1 : asemptomatiktir inflamasyon yoktur. Ekspoze kemik vardır.
- Evre 2 : semptomatiktir ve inflamasyon vardır. Ekspoze kemik vardır.
- Evre 3 : ekspoze kemik ve inflamasyon vardır. Alveolar kemiğin ötesine geçen yıkım mevcut olabilir.

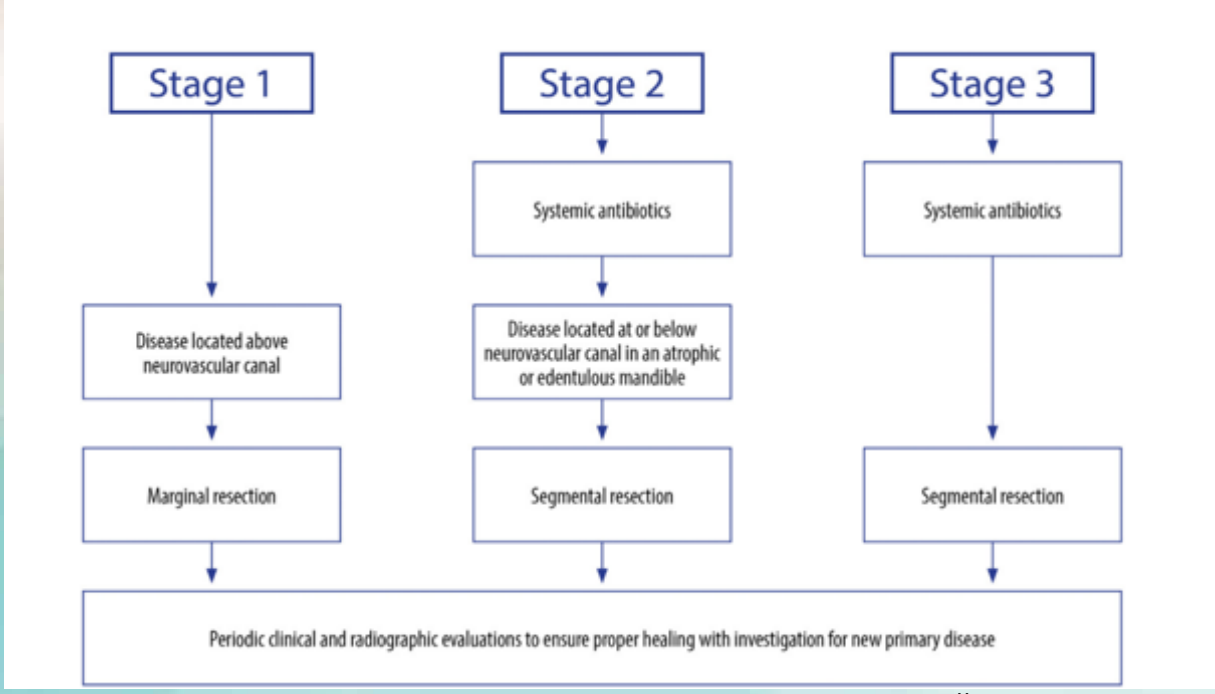
MRONJ için risk faktörleri :

- İlacı kanser sebebiyle alanlarda osteoporozdan daha fazla risk mevcut.
- Dentoalveolar operasyonlar (diş çekimi ,periodontal cerrahiler, implant vb)
- Kortikosteroid kullanımı.
- Diabet.
- Tütün kullanımı.

ARONJ TEDAVİSİ :

- ARONJ'un en standart tedavisi cerrahi tedavi olarak kabul edilir, ancak evreye bağlı olarak tedavi yaklaşımında bazı farklılıklar vardır. Tedavi şekli operatif ve non operatif olarak ikiye ayrılır.

Nonoperatif tedavi : Ameliyatsız tedavi ağırlıklı olarak hasta eğitimi, ağrı kontrolü ve açıkta kalan nekrotik kemiğin sekestrasyonuna izin vermek için sekonder enfeksiyonun kontrolüne odaklanır. Evre 1 hastalar, biyofilmi nekrotik kemik yüzeyinden uzaklaştırmak için klorheksidin yara bakımı ve iyileştirilmiş ağız hijyeni ile yönetilebilir. Evre 2 hastalar lokal yara bakımı ile mücadele edebilir ve semptom kontrolü için antibiyotik gerektirebilir. Hiperbarik oksijen tedavisi veya ozon tedavisi aronjun çözülmesi için denenebilir.



- Operatif tedavi: Ameliyatsız tedavi MRONJ için bir tedavi seçeneği olmaya devam ederken, operatif tedavi hastalığın tüm evreleri için yüksek başarı oranları ile giderek daha uygun bir seçenek olarak bildirilmektedir.
- Hiperbarik oksijen tedavisi, ozon tedavisi ve düşük seviyeli lazer tedavisi gibi çeşitli tedavi yöntemleri önerilmiştir. Ancak, bunlar birincil tedavi yöntemi olarak kabul edilmez, ek bir tedavi olarak kabul edilir.

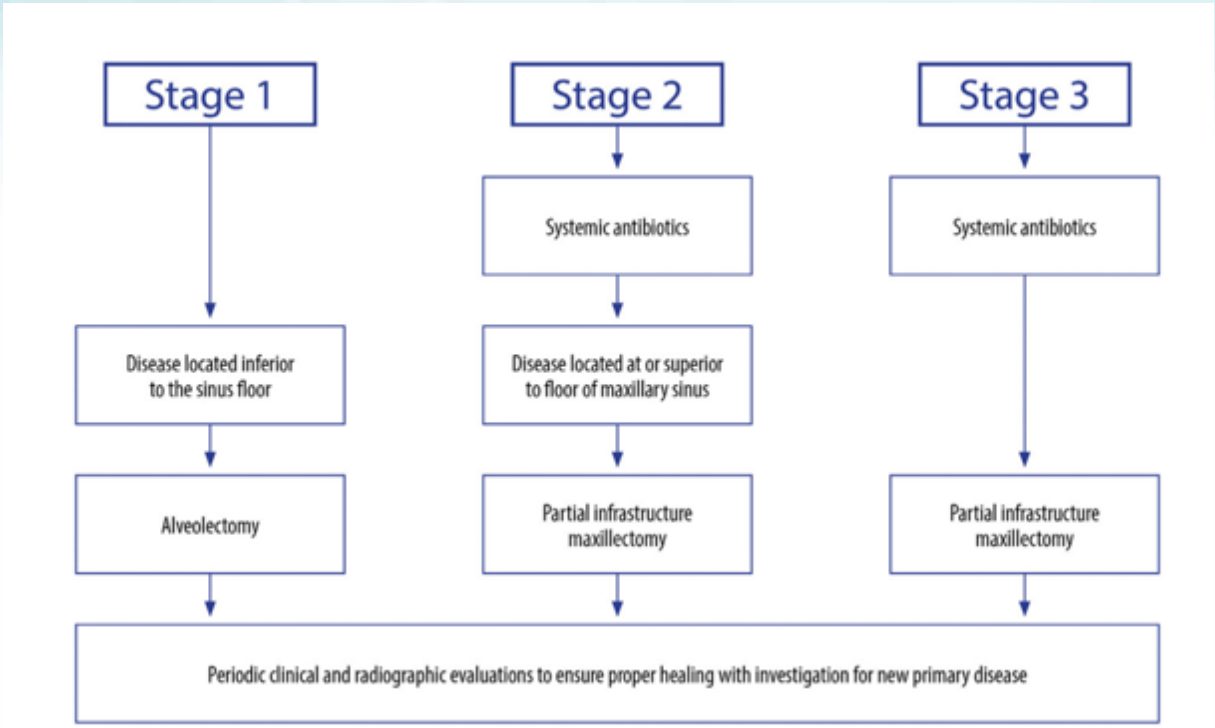


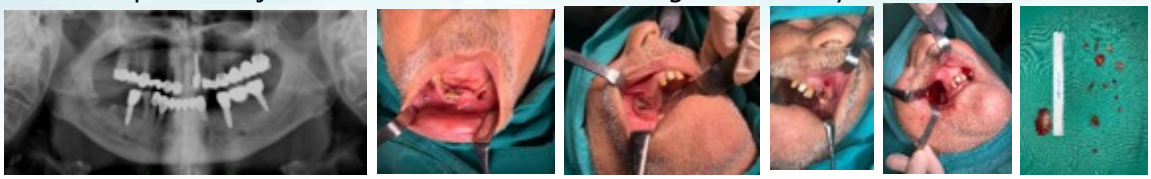
TABLE 4. Multinational Association of Supportive Care in Cancer/International Society of Oral Oncology Daily Oral Care Plan for Patients

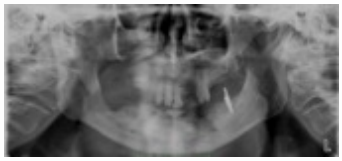
Intervention	Basic Oral Care Plan
Flossing	Floss at least once daily
	Waxed floss may be easier to use and minimize trauma to the gingivae
	If flossing causes bleeding of the gums that does not stop after 2 minutes, consult your oncology team
Brushing	Use a small, ultra-soft-headed, rounded-end, bristle toothbrush (an ultrasonic toothbrush may be acceptable)
	Use prescription strength fluoride toothpaste; spit out the foam but do not rinse mouth
	Use remineralizing pastes and chewing gum containing calcium and phosphate
	Brush within 30 minutes after eating and before bed; ensure the gingival portion of the tooth and periodontal sulcus are included
	Rinse toothbrush in hot water to soften the brush before using
	Brush tongue gently from back to front
	Rinse brush after use in hot water and allow to air dry
	Change toothbrush when bristles are not standing up straight
For patients with dentures	Remove dentures, plates, and prostheses before brushing
	Brush and rinse dentures after meals and at bedtime
	Remove from mouth for long periods (at least 8 hours per 24 hours) and soak in rinsing solution
Rinsing	Rinsing the oral cavity vigorously helps maintain moisture in the mouth, removes the remaining debris, and reduces the accumulation of plaque and infection
	Patients should rinse, swish, and spit with a bland rinse (1 teaspoon salt, 1 teaspoon baking soda in 4 cups of water) several times a day
	Club soda should be avoided because of the presence of carbonic acids
	Commercial mouthwashes with alcohol base or astringent properties are not recommended for patients with oral complications
	Debriding should only be done if absolutely necessary, if tissue is loose causing gagging or choking
Moisturizing the oral cavity	Moisturize the mouth with water or artificial saliva products or other water-soluble lubricants for use inside the mouth
	Avoid glycerin or lemon-glycerin swabs as they dry the mouth and do not moisturize
	Apply lubricant after each cleaning, at bedtime, and as needed
	Water-based lubricant must be applied more frequently
	Frequent rinsing as needed with basic mouth rinse
Lip care	To keep lips lubricated and moisturized, use only animal or plant-based oils such as bees wax, cocoa butter, and lanolin. Avoid petroleum-based products as these will cause drying and cracking
You should be having follow-ups a minimum of every 6 months with your dentist	
If you notice any signs or symptoms, please advise either your dentist or oncologist	

TABLE 4. Uluslararası Oral Onkoloji Derneği'nin mronj hastaları için yayınladığı temel oral hijyen planı

VAKA DERLEMESİ:

- 75 yaşında erkek hasta
- Osteoporöz sebebiyle iv yoldan 4 mg zometa almış
- 4 kadranda da ağrı, ekspoze kemik ve püy akıntısı şikayetiyle başvurdu.
- Aronj sebebiyle genel anestezi altında opere edilen hastanın sol mandibuladaki dışında tüm implantları çevresinde nekroze kemik olduğundan dolayı söküldü.





59 yaşında kadın hasta

- Meme ca sebebiyle denosumab kullanmış.

65 yaşında kadın hasta

- Meme ca sebebiyle oral yoldan ribosiklib 200 mg almış bu ilaç siklin bağımlı kinaz inhibitörüdür.


62 yaşında kadın hasta

- Meme CA sebebiyle İv yoldan 4 mg zometa almış.






TARTIŞMA:
2022 yılında drug holiday ile ilgili bir meta analiz yayınlandı. 4847 drug holiday yapılan hasta 1961 drug holiday yapılmayan hastayla kıyaslanmış. İki grup arasında anlamlı bir fark görülmemiş (p 0.10) Mevcut kanıtların sınırları dahilinde, bulgular ilaç tatillerinin MRONJ riskini en aza indirmeyeceğini ve bu nedenle tavsiye edilemeyeceğini ortaya koymuştur. Bazı ülkelerdeki ulusal kılavuzlar ilaç tatilini önermektedir, ancak yüksek doz AR ilaç tatilleri konusunda uluslararası bir fikir birliğine varılamamıştır. Büyük prospektif çalışmalar ve iyi kalitede randomize çalışmalarla daha kesin sonuçlara ulaşmak mümkün olabilir.

The Effect of Antiresorptive Drug Holidays on Medication-Related Osteonecrosis of the Jaw: A Systematic Review and Meta-Analysis

Monitoring Editor: Alexander Muacevic and John R Adler

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MRONJ'un cerrahi tedavisi, mukozal bütünlüğün sağlanması ve lezyon evresinin küçültülmesi, yaşam kalitesinde iyileşme ve özellikle onkolojik hastalarda ilaç tedavisinin daha hızlı geri alınması gibi faydalar sağlar. MRONJDA Ameliyatsız tedavi ağırlıklı olarak hasta eğitimi, ağrı kontrolü ve nekrotik kemiğin sekestrasyonuna izin vermek için sekonder enfeksiyonun kontrolüne odaklanır. Antibiyotik kullanımının da bazı sınırlamaları vardır ; Birincisi, hangi antibiyotiğin en etkili olduğu ve toplam uygulama süresi konusunda bir fikir birliği yoktur.
İkincisi, konservatif tıbbi tedavi genellikle ileri evrelerde işe yarasa da, çoğu klinisyen bunun yalnızca sonraki evrelerde enfeksiyonu kontrol etmek için yardımcı bir rol oynadığı konusunda hemfikirdir.

SONUÇ:
Sonuç olarak, Cerrahi tedavinin MRONJ'un ileri evrelerinin yönetimi için temel bir yöntem olduğu kabul edilir. (AMERİKAN MAKSİLLOFASİAL CERRAHİ DERNEĞİNE GÖRE). Bu yaklaşım, Evre 1 hastalık da dahil olmak üzere MRONJ'nin tüm evrelerine sahip hastalara uygulanabilir. Bu rezeksiyonlar, nekrotik kemiğin sınırlarının ötesinde, vital, kanayan bir kemik alanına kadar sınır gerektirir. MRONJ'nin operatif müdahalesi için ilaç tatillerinin yararı kanıtlanmamıştır bu konuda daha fazla çalışmaya ihtiyaç vardır.
MRONJ için cerrahi tedavi, debridman, küretaj, sekestrektomi ve rezeksiyondan oluşur.

KAYNAKÇA
Can Surgical Management Improve Resolution of Medication-Related Osteonecrosis of the Jaw at Early Stages? A Prospective Cohort Study
Amerigo Giudice[1], Selene Barone[2], Federica Diodati[2], Alessandro Antonelli[2], Riccardo Nocini[3], Maria Giulia Cristofaro[4]

Is the conservative non-surgical management of medication-related osteonecrosis of the jaw an appropriate treatment option for early stages? A long-term single-center cohort study
Oliver Ristow[1], Thomas Rückschloß[2], Michael Müller[2], Moritz Berger[2], Steffen Kargus[2], Christoph Pautke[3], Michael Engel[2], Jürgen Hoffmann[2], Christian Freudlsperger[2]

Medication-related osteonecrosis of the jaw: risk factors in patients under biphosphonate versus patients under antiresorptive-antiangiogenic drugs

Giulia Ghidini [1], Maddalena Manfredi [2], Ilaria Giovannacci [2], Giovanni Mergoni [2], Amin Sarraj [2], Maura Mureddu [2], Giovanna Giunta [2], Mauro Bonanini [2], Marco Meleti [2], Paolo Vescovi [2]

Surgical therapy for medication-related osteonecrosis of the jaw in osteoporotic patients treated with antiresorptive agents

Lukas Hauer [1], Jan Jambura [1], Daniel Hrusak [1], Miroslava Chalupova [1], Petr Posta [1], Stepan Rusnak [2], Vaclav Vyskocil [3]

American Association of Oral and Maxillofacial Surgeons' Position Paper on Medication-Related Osteonecrosis of the Jaws-2022 Update

Salvatore L Ruggiero [1], Thomas B Dodson [2], Tara Aghaloo [3], Eric R Carlson [4], Brent B Ward [5], Deepak Kademani [6]

Diagnosis and management of osteonecrosis of the jaw: a systematic review and international consensus

Aliya A Khan, Archie Morrison, David A Hanley, Dieter Felsenberg, Laurie K McCauley, Felice O'Ryan, Ian R Reid, Salvatore L Ruggiero, Akira Taguchi, Sotirios Tetradis, Nelson B Watts, Maria Luisa Brandi, Edmund Peters, Teresa Guise, Richard Eastell, Angela M Cheung, Suzanne N Morin, Basel Masri, Cyrus Cooper, Sarah L Morgan, Barbara Obermayer-Pietsch, Bente L Langdahl, Rana Al Dabagh, K Shawn Davison, David L Kendler, George K Sándor, Robert G Josse, Mohit Bhandari, Mohamed El Rabbany, Dominique D Pierroz, Riad Sulimani, Deborah P Saunders, Jacques P Brown, Juliet Compston; International Task Force on Osteonecrosis of the Jaw

[OP-086]

TREATMENT OF STAGE 2 MEDICATION-INDUCED OSTEONECROSIS OF THE JAW: A CASE REPORT AND LITERATURE REVIEW

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Abstract

Objectives: Medication-related osteonecrosis of the jaw (MRONJ) is a previously described debilitating condition in which patients experience progressive bone destruction in the maxilla and/or mandible after exposure to certain drugs. Clinical management of MRONJ remains controversial. The aim of our study was to review the current literature and present a case report on the effectiveness of pentoxifylline and tocopherol (PENTO protocol) on MRONJ.

Case report: In a patient with a preliminary diagnosis of stage 2 MRONJ (AAOMS staging system) admitted to our department, after 8 weeks perioperative treatment with PENTO protocol followed by a sequestrectomy operation, primary wound healing was achieved, symptoms were regressed, and no recurrence of the lesions was present.

Conclusion: Current literature supports the PENTO protocol to treat MRONJ as it is well tolerated with minimal side-effects, and non-expensive when compared with other treatment modalities. It was shown to relieve painful symptoms in patients, and significant new bone formation was observed at final follow-up. Observational and case-series studies have demonstrated that pentoxifylline and tocopherol are potentially useful in the management of MRONJ.

Key words: MRONJ, Stage 2, PENTO

1. Introduction

Medication-related osteonecrosis of the jaw (MRONJ) is a complication related to the prescription of bone-modifying agents used in the treatment of skeletal-related events, such as bone fracture, radiotherapy, or surgery, in patients with metastatic disease or those with osteoporosis or osteopenia (1).
In 2014, the American Association of Oral and Maxillofacial Surgeons (AAOMS) published a position paper to recommend discontinuation of the term bisphosphonate-related osteonecrosis of the jaw (BRONJ) and to promote the use of medication-related osteonecrosis of the jaw (MRONJ), reflecting the increased incidence of jaw osteonecrosis related to medications other than bisphosphonates (1). Bisphosphonates are a class of drugs commonly prescribed by multiple medical specialties (endocrinology, orthopedics, oncology), whose main function is to inhibit osteoclast activity, resulting in a decreased bone turnover. It has been used to treat a number of pathological conditions, such as osteoporosis, multiple myeloma, Paget disease, and metastasis to bone (from primary breast, prostate, and lung cancers) (2,3).
Clinical management of MRONJ remains controversial. Different therapeutical approaches, such as chlorhexidine 0.12% or 2% rinse, antibiotic therapy, hyperbaric oxygen (HBO), low-level laser therapy, laser surgery, conservative surgery, extensive surgery with or without fluorescent light, plasma-rich protein (PRP), teriparatide prescription and pentoxifylline and tocopherol (PENTO protocol), have been used for MRONJ management with varying success rates .
Pentoxifylline (PTX) is a non-selective inhibitor of phosphodiesterase and has been shown to have vasodilatory effects as well as an anti-tumor necrosis factor effect . Tocopherols (Vitamin E) are a class of organic chemical compounds consisting of various methylated phenols that possess antioxidant effects and can reduce inflammation and fibrosis of tissues . These drugs have pharmacological properties for bone remodeling, capillary dilation, angiogenesis, and decreasing inflammation, which can affect the etiology of the disease . PTX and tocopherol have been reported to be beneficial for the treatment of osteoradionecrosis and MRONJ.

2. Case Report

A 63-year-old male was presented to our department with chief complaints of numbness and pain in the mandible. Medical records revealed previous diagnosis of prostate cancer with remission and treatment with IV denosumab for 4 years. Intraoral examination revealed a fistula with pus drainage in the anterior region of the mandible and pain at the tip of the crest on palpation. Radiographic examination revealed radiopacity in the relevant region separated from the surrounding bone by a radiolucent border. (Figure 1)

Depending on the initial presentation a preliminary diagnosis of Stage 2 MRONJ was made and medical treatment with PENTO protocol was initiated (pentoxifylline 800 mg/day+ Tocopherol 800 I.U. /day). After 4 weeks of medical treatment surgical debridement with sequestrectomy was executed (Figures 2-3). Primary closure with 5-0 prolene sutures was performed (Figure 4). Amoxicillin-clavulanic acid and 0.12% chlorhexidine oral rinse were prescribed perioperatively. PENTO protocol was continued for an additional 4 weeks after the surgical debridement. During the follow up period, uneventful wound healing by primary intention was achieved and symptoms gradually subsided. No recurrent lesions were present at 5 months post-operatively.

3. Discussion

Surgical removal of exposed necrotic bone is suggested as treatment for late-stage MRONJ. The AAOMS developed a series of treatment algorithms to facilitate the evaluation and treatment approaches of patients with MRONJ, published in 2022 (4). These approaches were based on a recent review of nonsurgical and surgical treatments and their associated outcomes. A shared decision-making model emphasized that both nonsurgical and surgical management are acceptable for all stages of the disease based on surgical judgment and patient factors. Regarding preventive measures; dental extraction was reported to be the most common triggering factor, highlighting the importance of a complete anamnesis of patients, systemically compromised or not, before submitting them to dental surgical procedures.

Plenty of evidence suggests that pentoxifylline in association with tocopherol is an inexpensive, safe, and effective treatment for jaw osteoradionecrosis (5). Five studies have specifically elucidated the therapeutic value of pentoxifylline and tocopherol protocol on MRONJ treatment. In all cases, the PENTO protocol was associated minimal surgical intervention, and was responsible for relieving symptoms, lesion closure, and bone healing to varying extents; Epstein et al. (2010), Magremanne and Reychler (2014) , Owosho et al. (2016), Seo et al. (2020) , Demiray et al. (2023).

Other non-invasive modalities for MRONJ treatment evaluated in previous studies have shown different success rates. A randomized conducted by Freiberger et al. evaluated the role of hyperbaric oxygen therapy to treat MRONJ cases (6). Hyperbaric oxygen as an adjunct to conventional therapy was shown to decrease the time for symptom improvement and was associated with a higher rate of clinical improvement when compared with surgery and antibiotics alone. Complete gingival recovery, however, was achieved in only 52% of patients treated with hyperbaric oxygen therapy, and in 33% of patients treated with conventional therapy alone. Low-level laser therapy (LLLT) is another non-invasive treatment modality that has gained interest in recent years. A meta-analysis conducted by Fliefel et al. observed that of 322 patients with MRONJ treated with LLLT, complete lesion healing was found in 45.0%, partial healing in 5.6%, and no healing in 11.5% . Notably, five patients had progressive lesions in spite of therapy (3). Teriparatide, a recombinant parathyroid hormone, has also gained attention as a non-invasive therapy for MRONJ. A retrospective study conducted by Kim et al. (2014) demonstrated that success in treating MRONJ with teriparatide seems to be dependent on achieving optimum serum vitamin D levels as well as adequate immune status. Larger studies and controlled trials have not yet demonstrated the efficacy of these treatments.

While nonsurgical treatment remains a treatment option for MRONJ, it has been more frequently reported that surgical treatment is a viable option with high success rates in all stages of the disease. Numerous reports have reported high success rates associated with resection of MRONJ lesions. Furthermore, it has been reported that adopting a nonsurgical treatment approach for MRONJ does not result in the same sequestration of exposed necrotic bone and resolution of disease. Therefore, it has been suggested that early surgical intervention should be investigated and offered as a treatment option to reduce disease progression, recognizing that it may provide beneficial patient outcomes. In the literature, segmental or marginal resection of the mandible and partial maxillectomy have been reported as effective methods to control MRONJ.

4. Conclusion

Observational and case-series studies have demonstrated that pentoxifylline and tocopherol are useful in non-invasive management of MRONJ. PENTO protocol prescription was reported to be well tolerated, with minimal side-effects, and non-expensive when compared with other non-surgical treatment modalities. However, new studies with a higher level of scientific evidence, such as randomized clinical trials, and consequently, secondary studies with greater methodological rigor, are necessary to provide greater security to clinicians and patients who need to treat the disease, thus helping them to improve their quality of life.

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6. Figures

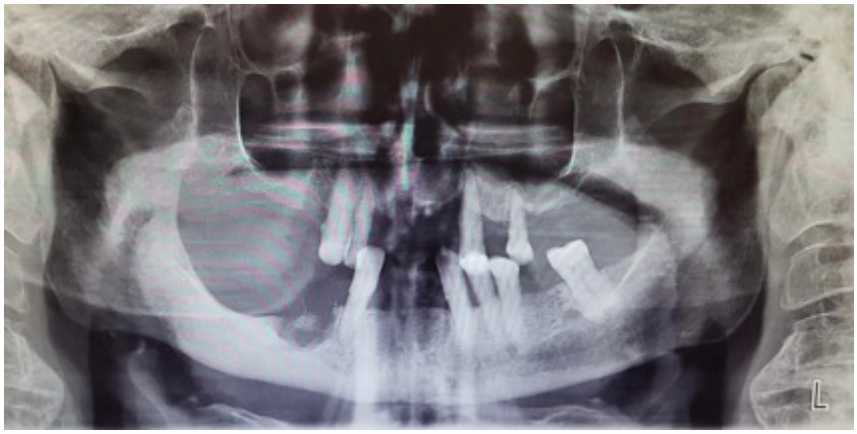

Figure 1: Radiological appearance of the lesion

Figure 2: Initial view after flaps are reflected

Figure 3: Clinical view after sequestrectomy

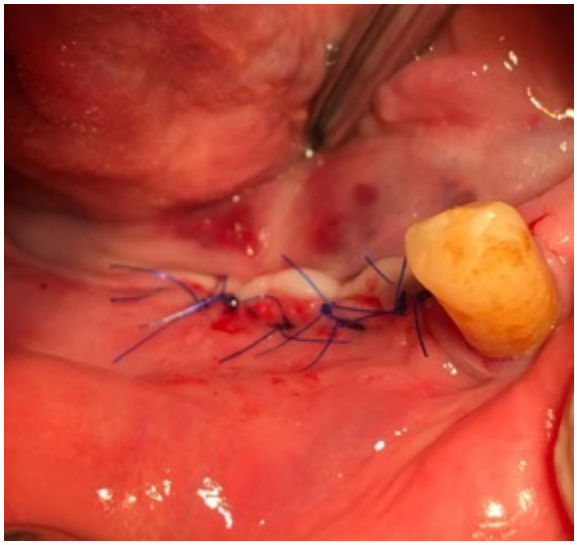

Figure 4: Primary closure with 5-0 prolene sutures

[OP-093]

INTRAORAL LIPOMA: A CASE REPORT AND LITERATURE REVIEW

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Abstract

Objectives: Lipomas are benign soft tissue tumours of mesenchymal origin. Only 1% to 5% of cases occur in the mouth. Clinically, lipomas present as asymptomatic, slow-growing and painless lesions. The maximum diameter of a lipoma varies between 1.2 and 2.0 cm. In this case report, the treatment of an oral lipoma measuring 6 cm and a review of the literature on similar lesions will be presented.

Case Report: A 62-year-old male patient was admitted to our clinic with the complaint of painless swelling in the left lower jaw. Clinical examination revealed a soft mass in the left buccal sulcus of the mandible covered with normal oral mucosa with yellowish colour. Total excised mass was diagnosed as lipoma after pathological examination.

Conclusion: Lipoma often remains unrecognised by the patient and is exposed to constant trauma. The only possible treatment is surgical excision of the lesion together with its capsule. Recurrence is rare.

Key words: lipoma, tumour, soft tissue

1. Introduction

Lipomas are benign tumours of mesenchymal origin, composed of mature adipocytes and usually surrounded by a thin fibrous connective tissue capsule.[1] Lipomas, which are very common in the human body, are rare in the oral and maxillofacial region.[2,3] Only 1% to 5% of cases occur in the mouth. [4] It is most commonly seen in males and occurs in the 4th to 6th decade of life.[5] The most common sites in the mouth are the buccal mucosa, upper and lower lips, palate, tongue, buccal sulcus, floor of the mouth and salivary glands.[6,7] Rarely, intraosseous lipomas may occur in the mandibular ramus or maxilla.[8,9]
Oral lipomas usually present clinically as asymptomatic, slow-growing, painless, well-circumscribed, superficial or deep submucosal lesions covered by normal mucosa.[10] The maximum diameter of a lipoma varies between 1.2 and 2.0 cm, but cases of lipomas larger than 7 cm have been reported.[11]
Histologically, it consists of mature adipocytes divided into lobules by septa of fibrous connective tissue, usually surrounded by a thin capsule. It shows no cellular atypia.[12]
Considering the similarity between the histological features of lipomas and normal adipose tissue, it is important to make a differential diagnosis with other tumour-like lesions. These include epidermoid cysts, pleomorphic adenomas, fibromas, thyroglossal duct cysts, ectopic thyrohyoid tissue, mucoepidermoid carcinoma, oral dermoid and lymphoepithelial cysts.[13,14] Oral lipomas can appear as deep nodules with a uniform colour on the surface. The differential diagnosis should include salivary gland tumours and other benign mesenchymal neoplasms.[15]
The etiology of lipomas includes mechanical trauma, endocrine disorders, obesity, hypercholesterolaemia, radiation, chromosomal abnormalities and diabetes mellitus. However, the exact etiology and pathogenesis are unknown.[11]
This study presents the treatment of a large lipoma in the buccal sulcus and a review of the literature on similar lesions.

2. Case Report

A 62-year-old systemically healthy male patient was admitted to Akdeniz University Faculty of Dentistry, Department of Oral and Maxillofacial Surgery, with the complaint of a painless swelling of the left lower jaw, present for one year and slowly increasing. On clinical examination, soft, yellowish, mobile mass was found in the buccal sulcus of the left mandible at the level of the canine premolars. The mass was approximately 3x2 cm in size and was covered by intact mucosa. (Figure 1,2). The patient had no extraoral swelling causing facial asymmetry. There was no lymphadenopathy. The mass had no radiographic findings. Excision was decided with a preliminary diagnosis of lipoma. Informed consent form was obtained from the patient. After local anaesthesia around the lesion, a horizontal incision was made with a scalpel in the buccal sulcus area. (Figure 3). Blunt dissection was performed with Metzenbaum scissors to avoid damaging the capsule of the lesion. (Figure 4). The lobulated and yellowish mass was completely excised. It was found to be up to 6 cm in diameter at its widest point. (Figure 5). After control of bleeding in the area, the flap was closed with 3-0 Vicryl suture. (Figure 6). The excised mass was sent to the pathology laboratory for histopathological examination. The pathology result was a lipoma and the patient is still being followed up.

3. Discussion

Lipomas are mesenchymal connective tissue tumours. It is characterised by painless, slow and limited growth in soft tissue. Although it is a benign form, unlike liposarcoma, the constant trauma of chewing should be taken into account because of the risk of malignant transformation.[16]

Studart-Soares et al analysed 450 cases in a study of common oral lipoma regions. According to this study, the most common sites were buccal mucosa (38.7%), vestibule (7.8%), retromolar area (4.7%) and other sites (48.8%). There was no significant difference between men (52.2%) and women (47.8%).[12]

A study by Taira et al analysed 207 cases. Buccal mucosa was the most common site (40.6%), followed by tongue (17.9%), lips (12.6%) and other sites (28.9%). No significant difference was found between genders.[17]

In a 14-year retrospective study by Morais et al, 7861 oral and maxillofacial lipomas were clinico-pathologically evaluated. The incidence is higher in female patients (68%), with a mean age of 58.8 years. The histological subtypes found in the study were conventional lipoma, fibrolipoma, spindle cell lipoma, sialolipoma, osteolipoma, chondrolipoma and intramuscular lipoma. (Table.1). The most common site affected is the buccal mucosa (21.8%). The most commonly diagnosed histological variants are traditional lipoma and fibrolipoma. Average size is 1.6 cm. Over 4 cm, only conventional lipomas (11.7%) and fibrolipomas (12.5%) were observed. (Table.2). The lesion was superficial in 65.3% of cases and deep in 4.2%.[18]

In 2013, the World Health Organization (WHO) created the Classification of Soft Tissue Tumours, which lists different adipocytic tumours, including 11 benign subtypes, 1 intermediate category, and 5 categories of malignant adipose neoplasms.[21] According to this classification, lipomas and many lipomatous lesions are considered benign. The intermediate category (locally aggressive) included atypical lipomatous tumour/well differentiated liposarcoma (ALT/WDLPS), adipocytic, sclerosis and inflammatory types.

Malignant soft tissue tumours are differentiated liposarcoma, myxoid liposarcoma, pleomorphic liposarcoma and liposarcoma (type not specified). (Table.3).

A possible risk of having a large mass in the oral cavity and being exposed to trauma is that the histopathological features may degenerate, leading to ALT (atypical lipomatous tumour)-like features. Differential diagnosis with other adipocytic tumours is made by histological examination and gene sequencing. [22] ALT/WDLPS has 4 histological variants, of which adipocytic (lipoma-like) is the most common. ALT/WDLPS is a form of adipocytic tumour that rarely occurs in the buccal cavity. Its danger lies in the possible differentiation of adipocytes leading to malignancy. [23]

Lipomas usually present as single/solid lesions and may range from small, well-circumscribed lesions to large, poorly-circumscribed, lobulated masses. If the clinical manifestation is multiple lesions, it may be associated with syndromes such as neurofibromatosis, Gardner syndrome, Dercum's disease, familial multiple lipomatosis, encephalocraniocutaneous lipomatosis, Pai syndrome, Proteus syndrome or Cowden syndrome. Cowden syndrome is associated with mutations in the PTEN gene and is associated with multiple lipomas, facial trichilemmomas, oral papillomas, punctate palmoplantar keratosis and various malignancies.[24,25,26]

Oral lipomas are treated conservatively with total excision and recurrence is extremely rare. [27,28] No significant difference in prognosis has been reported between the main histopathological variants of lipomas. [29] An important exception is intramuscular lipomas because radical surgical excision is difficult to achieve and recurrence is highly likely. Intramuscular lipomas are usually deeper, non-encapsulated and have an infiltrative growth pattern.[30]

Recurrence is rare, but aggressive excision can cause ruptures in the capsular membrane and cell shedding, which can lead to recurrence.[31]

4. Conclusion

Lipoma is a benign soft tissue tumour and is rare in the oral region. It is often unrecognised by the patient and the main problem is the constant traumatisation of the lesion as it interferes with normal chewing. The only possible treatment is surgical excision of the lesion together with its capsule.

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5. Figures

6.

Figure 1: Intraoral view of the lesion

Figure 2: Occlusal view of the lesion

Figure 3: View of the lesion after incision

Figure 4: View after blunt dissections

Figure 5: Image of a mass 6 cm in length

Figure 6: View after primary closure with 3-0 vicryl

7. Tables

Table 1: Clinical and demographic features and histological subtypes of oral lipomas

Tumour	n (%)	Age (average/interval)	Gender (Male/Female)	Most common anatomical region	The most common clinical diagnosis
Oral Lipoma	95 (100%)	58,8 years (23–88)	6/13	Buccal mucosa	Lipoma
Conventional Lipoma	60 (63%)	59 years (23–88)	3/5	Buccal mucosa	Lipoma
Fibrolipoma	24 (26%)	57,8 years (38-82)	1/5	Buccal mucosa	Fibroma
SCL	2 (2%)	60 years (53–67)	1/1	Lower lip	Fibroma
Sialolipoma	6 (6%)	61,2 years (46-77)	1/2	Floor of the mouth/Lower lip	Lipoma
Osteolipoma	1 (1%)	72 years (72–72)	0/1	Lower alveolar ridge	Ossification fibroma
Chondrolipoma	1 (1%)	59 years (59–59)	0/1	Tongue ventrum	Lipoma
Intramuscular lipoma	1 (1%)	46 years (46-46)	1/0	Maxillozygomatic region	NR

SCL: Spindle cell lipoma; n: Patient count; M: Male; F: Female; NR: Unreported.

Table 2: Lipoma dimensions according to histological subtypes.
SCL: Spindle cell lipoma; n: Patient count; NR: Unreported.

	Conventional Lipoma	**Fibrolipoma**	**SCL**	**Sialolipoma**	**Osteolipoma**	**Chondrolipoma**	**Intramusculer Lipoma**	**TOTAL (*n* = 95; 100%)**
<1 centimetre	10 (16,6%)	3 (12,5%)	1 (50%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	14 (14,7%)
1-4 centimetre	28 (46,7%)	14 (58,3%)	1 (50%)	4 (66,7%)	1 (100%)	1 (100%)	0 (0%)	49 (51,6%)
>4 centimetre	7 (11,7%)	3 (12,5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	10 (10,5%)
NR	15 (25%)	4 (16,7%)	0 (0%)	2 (33,7%)	0 (0%)	0 (0%)	1 (100%)	22 (23,2%)

Table 3: Table of Soft Tissue Tumours created by WHO.

• Benign Lipoma Lipomatosis Lipomatosis of nerve Lipoblastoma/lipoblastomatosis Angiolipoma Myolipoma of soft tissue Chondroid lipoma Extra-renal angiomyolipoma Extra-adrenal myelolipoma Spindle cell/pleomorphic lipoma Hibernoma
• Intermediate (locally aggressive) Atypical lipomatous tumor/well-differentiated liposarcoma (ALT/WDLPS) Adipocytic Sclerosing Inflammatory types
• Malignant Dedifferentiated liposarcoma Myxoid liposarcoma Pleomorphic liposarcoma Liposarcoma, not otherwise specified

[OP-111]

SEQUESTROTOMY SURGERY APPLIED TO THE MANDIBLE AND MAXILLA: CASE REPORT

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ABSTRACT

OBJECTIVES: In this case report, we describe the treatment and six-month follow-up of four cases of drug-induced osteonecrosis of the jaws (MRONJ) due to bisphosphonate use for different indications, who underwent sequestrotomy surgery and platelet-rich fibrin (PRF).

CASE REPORT AND LITERATURE REVIEW: A 69-year-old male patient (case 1) with prostate cancer and bone metastases was admitted to the outpatient clinic with complaints of pain, migration and extrusion of the teeth in the relevant region. Radiolucent, well-circumscribed, labile bone segment was observed and the patient was treated with dressing and antibiotherapy until the day of operation. Sequestration was observed and the patient was operated under local anesthesia.
A 66-year-old male patient (case 2) who was known to be using bisphosphonates due to kidney cancer, lung and bone metastases was admitted to our outpatient clinic with the complaint of pain after tooth extraction in an external center. The patient was treated with dressing and antibiotherapy until the formation of a radiolucent, well-circumscribed, labile bone segment. After sequestration, sequestrotomy was performed under local anesthesia and PRF was placed in the operation field.
A 65-year-old male patient with kidney cancer and known bone metastases was admitted to our outpatient clinic with complaints of pain and pus flow. The patient was treated with dressing and antibiotherapy until a radiolucent, well-circumscribed, labile bone was seen. After sequestration, sequestrotomy was performed under local anesthesia and PRF was placed in the operation field.
A 66-year-old woman with osteoporosis and bisphosphonate use was admitted to our outpatient clinic with the complaint of soft tissue non-healing and pain on the seventh postoperative day after implant surgery in an external center. Radiolucent, well-circumscribed, labile bone segment was observed and the patient was treated with dressing and antibiotherapy until the day of operation. Sequestration was observed and sequestrotomy was performed under local anesthesia. The treatment approach applied was compared with the results obtained in the current literature review.

CONCLUSIONS: Sequestromy was performed in a total of four cases. The first and second cases were followed up for a total of four months, the third case for six months and the fourth case for one month. If the cases had first month follow-up X-rays, third month and sixth month follow-up X-rays were taken. According to the data obtained from the literature review, it was seen that similar results were achieved by using similar treatment methods in the studies reported in MRONJ cases.

Keywords:Sequestrotomy,sequester,osteoporosis,metastasis

1.INTRODUCTION: MRONJ is characterized by necrotic bone present in the maxillofacial area that persists for more than eight weeks in patients receiving antiresorptive or antiangiogenic drugs for bone metastases or osteoporosis. (1) The first article on medication related osteonecrosis of the jaw (MRONJ) was published in 2003. (2)
Osteonecrosis is most common in the jaw bones, but also in the hip and knee bones. Although the pathophysiology of MRONJ cases has not yet been fully elucidated, it may be explained by altered bone remodeling mechanism or suppression of bone resorption, infection, immune system failure, inhibition of angiogenesis, soft tissue toxicity, chronic microtrauma and vitamin D deficiency.(3)
Bisphosphonates are currently used in osteoporosis, Paget's disease, multiple myeloma, fibrous dysplasia, hypercalcemia due to malignancy, bone metastases and some metabolic bone diseases. These drugs are divided into two groups: nitrogen-containing (alendronate, rised ronate, pamidronate, ibandronate, zoledronic acid) and nitrogen-free (etidronate, clodronate). (4)

Mechanism of action of bisphosphonates:1) on bone, 2) On osteoclasts, 3) Antiangiogenic effects. Bisphosphonates inhibit new vessel formation with their antiangiogenic properties. This systemic effect is both antitumor and a delaying effect on wound healing and tissue repair.(5)

2.CASE REPORTS AND LITERATURE REVIEW:

CASE 1: A 64-year-old male patient with a history of prostate cancer and secondary bone metastasis and known history of iv bisphosphonate use was admitted to the outpatient clinic with the complaint of tooth migration. Demarcation line was observed in the radiography of the patient and sequestrotomy was performed under prophylactic antibiotic pressure. Extraction of the teeth in the sequestration area was performed under local anesthesia. The necrotic mobile segment was separated from the socket. The sharp edges were corrected with rotary instruments. PRF was applied to the socket. The defect areas in the right maxilla and right mandible were sutured primerally.

CASE 2: A 66-year-old male patient was admitted to our outpatient clinic with the complaint of pain. The patient was known to have a history of iv bisphosphonate use with renal cancer, lung and bone metastases and no demarcation line was observed on radiography. Antibiotherapy was used when necessary for the treatment of systemic infection findings observed during the two-month clinical follow-up. Sequestrotomy was performed with antibiotic prophylaxis after the demarcation line was formed and the sequester was mobilized. The sharp edges were corrected with rotary instruments, PRF was applied to the socket, and the operation site in the right mandible was sutured primarily.

CASE 3: A 65-year-old male patient was admitted to the outpatient clinic with the complaint of pain. The patient was known to have a history of iv bisphosphonate use with renal cancer and secondary bone metastasis. Sequestrotomy was performed after the demarcation line was seen on the radiograph and the necrotic bone segment was mobilized. The sharp edges were corrected with rotary instruments, PRF was applied to the socket, and the operation site in the right maxilla was sutured primarily.

CASE 4: A 66-year-old female patient who underwent implant surgery in an external center presented to our outpatient clinic on the seventh postoperative day with a complaint of pain and a physician referral. Sequestrotomy was performed after the demarcation line was seen and the necrotic segment was mobilized. Two implants were removed under local anesthesia, the necrotic mobilized segment was removed, and the sharp edges were corrected. PRF was applied to the socket. The operation site in the right mandible was sutured primary.

3.DISCUSSION: Bisphosphonate-related osteonecrosis of the jaw occurs at different times and severity depending on the duration of use, dose, route of administration, nitrogen content of the drug, systemic health problems of the patient, medications, oral hygiene, and dental interventions. (6) Osteonecrosis of the jaws due to the use of bisphosphonates is seen in 65% in the lower jaw, 26% in the upper jaw, and 9% in both jaws. Multifocal and bilateral osteonecrosis is more common in the upper jaw than in the lower jaw (21%-31%).(7)

Failure to create an aseptic environment in the oral cavity, which has a large microflora and is prone to trauma, increases the risk of MRONJ formation. In addition, the fact that alveolar bone can be opened to the oral environment and contaminated even in simple surgical interventions increases the risk of osteonecrosis (8).

Bisphosphonates have been shown to disrupt endothelial cell proliferation, adhesion and migration in vitro. When bisphosphonates reach sufficient concentrations in bone, they have a toxic effect on the soft tissue adjacent to the bone and covering the bone surface. As a result, mucosal integrity in the oral cavity is disrupted and healing is delayed.MRONJ usually develops after tooth extraction or oral surgery, but it is also reported to occur spontaneously in 40% of cases. The prognosis is worse in spontaneous lesions.(9)

Erdil et al. reported in an archival study that cases reconstructed with microvascular free flaps were highly successful in terms of preventing recurrence.(10)

In a study conducted by Asaka et al. with 102 patients using bisphosphonates for osteoporosis, the patients were divided into two groups as PRF group and control group. In the PRF group, closure with granulation tissue was observed in all sockets within two weeks; at the end of four weeks, all sockets were completely epithelialized. In the control group, delayed healing was seen in nine patients after four weeks. Nevertheless, healing was observed in these patients at the end of eight weeks. According to the results of the study, it has been shown that PRF can reduce the risks of delayed healing in procedures such as tooth extraction in patients receiving oral bisphosphonate treatment.(11)

4.CONCLUSION: In cases diagnosed with osteonecrosis, medical treatment should be initiated first. The bone area where osteonecrosis has developed can be primary closed with mucosa using surgical techniques. Localized surgical debridement can also be performed if there is pain in the lesion and a significant secondary infection. The aim of the treatment of bisphosphonate-induced osteonecrosis, as in

the four cases we presented, is to control pain and infection. Atraumatic trimming of sharp bone edges, long-term antibiotic use, chlorhexidine mouthwashes and oral hygiene are commonly adopted methods.

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MANDİBULA VE MAKSİLLAYA UYGULANAN SEKESTROTOMİ CERRAHİSİ:VAKA RAPORU

AMAÇ: Bu vaka raporunda,bifosfonat kullanımına bağlı olarak gelişen MRONJ/BRONJ gelişimiyle birlikte sekestrotomi cerrahisi uygulanan 4 vakanın tedavisinden ve 6 aylık takiplerinden bahsedilmişitir.

VAKA RAPORU VE LİTERATÜR DERLEMESİ: 2024 yılında Uşak Üniversitesi Ağız Diş ve Çene Cerrahisi Anabilim Dalı polikliniğimize böbrek kanseri olduğu ve kemik metastazları görüldüğü bilinen (by)64 yaşındaki erkek hastanın (vaka 1) ağrı,ilgili bölgedeki dişlerde migrasyon ve dişlerde ekstraksiyon şikayetleri olduğu öğrenilmiştir.Radyolüsent iyi sınırlı labil kemik görülen hasta operasyon gününe kadar pansuman ve antibiyoterapi uygulanmıştır.Sekestr oluşumu görülen hasta lokal anestezi altında opere edilmiştir.Hastanın sekestrotomi tedavisi ve 4 aylık kontrolleri yapılmıştır.
67 yaşında (yv)akciğer kanseri ve kemik metastazları nedeniyle bifosfonat kullanımı olduğu bilinen erkek hasta (vaka 2) dış merkezde diş çekimi sonrası ağrı şikayeti sebebiyle tarafımıza başvurmuştur. Radyolüsent iyi sınırlı labil kemik görülene kadar hastaya pansuman ve antibiyoterapi uygulanmıştır. Sekestr oluşumu görülen hasta lokal anestezi altında opere edilmiştir. Hastanın sekestrotomi tedavisi ve 4 aylık kontrolleri yapılmıştır.
64 yaşında böbrek kanseri olduğu ve kemik metastazları görüldüğü bilinen erkek hasta(rb) ağrı ve püy akışı şikayetiyle tarafımıza başvurmuştur. Radyolüsent iyi sınırlı labil kemik görülene kadar hastaya pansuman ve antibiyoterapi uygulanmıştır. Sekestr oluşumu görülen hasta lokal anestezi altında opere edilmiştir. Hastanın sekestrotomi tedavisi ve 6 aylık kontrolleri yapılmıştır.
66 yaşında(şk) osteoporoz sebebiyle bifosfonat kullanımı olduğu bilinen kadın hastanın dış merkezde implant cerrahisi postoperatif 7. Günde yumuşak doku iyileşmemesi ve ağrı şikayetiyle tarafımıza başvurmuştur. Radyolüsent iyi sınırlı labil kemik görülen hasta operasyon gününe kadar pansuman ve antibiyoterapi uygulanmıştır.Sekestr oluşumu görülen hasta lokal anestezi altında opere edilmiştir.Hastanın sekestrotomi tedavisi ve 1 aylık kontrolleri yapılmıştır.Hastalara uygulanan tedavi yöntemimiz mevcut literatür taramasında elde edilen sonuçlarla karşılaştırılmıştır.

SONUÇ: Toplamda 4 vakaya sekestromi uygulanmıştır.Cerrahi saha primer olarak kapatılmıştır.1 ve 2. Vakalar toplamda 4 ay 3. Vaka 6 ay 4. Vaka ise 1. ay kontrolleri yapılmıştır.Vakaların 1. Ay takip röntgenleri varsa 3. Ay ve 6. Ay takip röntgenleri alınmıştır. Literatür taraması ile elde edilen verilere göre MRONJ/BRONJ vakalarında bildiren çalışmalarda da benzer tedavi yöntemleri kullanılarak benzer sonuçlara ulaşıldığı görülmüştür.

Anahtar Kelimeler: Sekestrotomi,sekestr,osteoporoz,metastaz

1.GİRİŞ: MRONJ, kemik metastazı veya osteoporoz için antirezorptif veya antianjiyojenik ilaç alan hastalarda 8 haftadan uzun süre devam eden, maksillofasiyal alanda mevcut olan nekrotik kemikle karakterizedir.ilaç kullanımına bağlı gelişen çene osteonekrozu [medication related osteonecrosis of the jaw (MRONJ)] hakkında ilk makale 2003 yılında yayımlandı. Osteonekroza, en sık çene kemikleri olmak üzere kalça ve diz kemiklerinde de rastlanmaktadır. MRONJ vakalarının patofizyolojisi, henüz tam olarak aydınlatılamamış olmakla birlikte bu durum, kemiğin 'remodeling' mekanizmasının değişmesi veya kemik rezorpsiyonunun baskılanması, enfeksiyon, immün sistem yetmezliği, anjiyogenezin inhibisyonu, yumuşak doku toksisitesi, kronik mikrotravmalar ve D vitamini yetersizliğiyle açıklanabilmektedir.(1) . Bifosfonatlar, günümüzde osteoporoz, Paget hastalığı, multiple myeloma, fibröz displazi, maligniteye bağlı hiperkalsemi, kemik metastazları ve bazı metabolik kemik hastalıklarında kullanılmaktadır. Bu ilaçlar; nitrojen içeren (alendronat, rised ronat, pamidronat, ibandronat, zoledronik asit) ve nitrojen içermeyenler (etidronat, klodronat) olarak iki gruba ayrılır. Bifosfonata bağlı çene kemiklerinde gelişen osteonekroz, ilk olarak 2003 yılında Marx ve ark. tarafından tanımlanmıştır (2-3). Bifosfonatların etki mekanizması:1)Kemik üzerine, 2) Osteoklastlar üzerine, 3) Antianjiyogenik etkiler şeklindedir. Bifosfonatlar, antianjiojenik özellikleri ile yeni damar oluşumunu inhibe etmektedirler. Bu sistemik etki, hem tümör damarlaşmasına karşıdır hem de yara iyileşmesini ve doku tamirini geciktirici bir etkidir.(4)

2.MATERYAL METOD:

VAKA 1:10.04.2024 tarihinde Uşak Üniversitesi Diş Hekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Ana Bilim Dalına 64 yaşındaki erkek hasta diş migrasyonu şikayetiyle başvurdu.Böbrek kanseri ve sekonder kemik metastazı görülen iv bifosfonat kullanım öyküsü olduğu bilinen hastanın radyografisinde demarkasyon hattı izlenmiş olup 24.04.2024 tarihinde profilaktik antibiyotik baskısı altında sekestrotomi yapılması planlandı.Lokal anestezi altında sekestr sahasında bulanan dişlerin çekimi yapılmıştır.Nekroze mobilize kemik soketten ayrıldı.Sivri kemik kenarlar döner turlu aletler ile düzeltildi.Sokete L-PRP(?) uygulanmıştır.Maksilla ve mandibuladaki defekt sahaları primer olarak suture edildi.

VAKA 2: (?)tarihinde Uşak Üniversitesi Diş Hekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Ana Bilim Dalına 67 yaşındaki erkek hasta ağrı şikayetiyle başvurdu.Akciğer kanseri ve sekonder kemik metastazı görülen iv bifosfonat kullanım öyküsü olduğu bilinen hastanın radyografisinde demarkasyon hattı izlenmemiştir. 2 ay süreyle düzenli olarak antibiyotik tedavisi(?) ve pansuman yapılan hastanın demarkasyon hattı oluşması ve sekestrın mobilize olmasıyla birlikte antibiyotik profilaksisi ile cerrahisi yapılmıştır. Nekroze mobilize kemik soketten ayrıldı.Sivri kemik kenarlar döner turlu aletler ile düzeltildi.Sokete L-PRP(?) -PRF(?) uygulanmıştır.Mandibuladaki defekt sahası primer olarak suture edildi.

VAKA 3: (?) tarihinde Uşak Üniversitesi Diş Hekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Ana Bilim Dalına 64 yaşındaki erkek hasta ağrı şikayetiyle başvurdu.Böbrek kanseri ve sekonder kemik metastazı görülen iv bifosfonat kullanım öyküsü olduğu bilinen hastanın radyografisinde demarkasyon hattı izlenmiştir.(?) tarihinde profilaktik antibiyotik baskısı altında hemimaksillektomi yapılması planlandı.Lokal anestezi altında nekroze mobilize kemik soketten ayrıldı.Sivri kemik kenarlar döner turlu aletler ile düzeltildi.Sokete L-PRP(?) uygulanmıştır.Maksilladaki defekt sahası primer olarak suture edildi.

VAKA 4: (?) tarihinde Uşak Üniversitesi Diş Hekimliği Fakültesi Ağız Diş ve Çene Cerrahisi Ana Bilim Dalına 66 yaşındaki kadın hasta dış merkezde implant cerrahisi yapılan hasta postoperatif 7. günde ağrı şikayetiyle ve hekim sevkiyle başvurdu.(?) tarihine kadar antibiyoterapi ve düzenli pansumanları yapılan hastanın (?) tarihinde sekestrotomisi yapıldı.Lokal anestezi altında 2 implant sökümü, nekroze mobilize kemiğin çıkarılması,sivri kemik kenarlarının düzeltilmesi gerçekleştirildi. Sokete L-PRP(?) uygulandı.Mandibuladaki defekt sahası primer olarak suture edildi.

3.TARTIŞMA: 2003 yılında bifosfonatların maksillofasiyal kemiğin nekrozunu indükleyebildiği ve bifosfonat ile çene osteonekrozu (BRONJ) gelişebilidiği literatürlerde rapor edilmektedir.(5) Bifosfonatla ilişkili çene osteonekrozu, ilacın kullanım süresine, dozuna, veriliş yoluna, ilacın nitrojen içeriğine, hastanın sistemik sağlık sorununa, kullandığı ilaçlara, ağız hijyenine, dental girişimlere göre farklı zamanlarda ve şiddette ortaya çıkar. Bifosfonatların kullanımına bağlı çenelerde görülen osteonekroz alt çenede %65, üst çenede %26, her iki çenede %9 oranında görülmektedir. Multifokal ve çift taraflı olarak alt çeneye oranla üst çenede daha çok (% 21-% 31) görülmektedir.

Geniş bir mikrofloraya sahip olan oral kavitede aseptik ortam oluşturulamaması ve travmaya yatkın olması çene kemiklerinde osteonekroz oluşma riskini artırır. Buna ek olarak basit cerrahi girişimlerde bile alveol kemiğin ağız ortamına açılarak kontamine olabilmesi de osteonekroz riskini artırır. Bifosfonatların endotel hücre proliferasyonunu, adezyonunu ve migrasyonunu bozduğu in vitro olarak gösterilmiştir. Bifosfonatlar kemikte yeterli konsantrasyona ulaştıkları zaman kemiğe komşu, kemik yüzeyini örten yumuşak dokuda toksik etki oluştururlar. Buna bağlı olarak oral kavitede mukoza bütünlüğü bozulur ve iyileşme gecikir. Bifosfonat sonrası oluşan osteonekroz, genellikle diş çekimi ya da oral cerrahi işlem sonrasında gelişebildiği gibi, %40 oranında spontan olarak oluşabildiği de bildirilmektedir. Spontan gelişen lezyonlarda prognoz daha kötüdür.(6)

Erdil ve ark. yaptığı arşiv araştırmasında yapılan çalışmalarda; mikrovasküler serbest flepler ile rekonstrükte edilen vakaların nüksü önleme açısından oldukça başarılı oldukları belirtilmiştir.(7)

SONUÇ: Kemik metastazları nedeni ile bifosfonat kullanan hastalarda çene bölgesinde yumuşak doku şişliği, ağrı, ekspoze kemik doku gibi şüpheli semptom ve bulgular varlığında metastaz dışı İlaca bağlı olarak gelişen bu özgün kemik nekrozu için henüz kesin bir tedavi bulunmamaktadır. Osteonekroz teşhisi konulan vakalarda öncelikle medikal tedaviye başlanılmalıdır. Osteonekroz gelişmiş olan kemik bölgesi, cerrahi teknikler kullanılarak mukoza ile primer kapatılabilir. Eğer lezyonda ağrı, belirgin bir sekonder enfeksiyon varsa lokalize cerrahi debridman da yapılabilir.Sunduğumuz 4 vakada olduğu gibi bisfosfonata bağlı osteonekroz gelişen olguların tedavisinde amaç ağrının ve enfeksiyonun kontrol altına alınmasıdır. Keskin kemik kenarlarının atravmatik olarak düzeltilmesi, uzun süreli antibiyotik kullanımı, klorheksidinli ağız gargaraları ve ağız hijyeninin sağlanması yaygın olarak benimsenmiş yöntemlerdir.(8-9-10).

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Rare Intraoral White Spongeous Nevus: A Case Report

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Absract

Objectives: The white sponge nevus (WSN) is an autosomal dominant, hereditary genodermatosis that does not discriminate between gender and race. WSN can occur in the oral, esophageal, rectal, vaginal or anus mucosa. The prevalence of WSN in the literature is reported to be less than 1 in 200,000. Diagnosis usually relies on the distinctive clinical presentation and patient history.
Case Report: A 34-year-old male patient admitted to our clinic for white lesions in oral cavity. An incisional biopsy was taken from the buccal mucosa and sent for pathological examination. The diagnosis of white spongiform nevus was made based on clinical and histological images.
Conclusion: The characteristic clinical presentation of white sponge nevus consists of white plaques in the oral cavity, necessitating differentiation from other white lesions such as oral leukoplakia, focal epithelial hyperplasia (Heck's disease), proliferative verrucous leukoplakia, and even squamous cell carcinoma. It can also be excluded by failure to respond to antifungal agents to differentiate it from oral fungal lesions. Since WSN resembles other lesions, exfoliative cytological preparations or biopsy should be taken to avoid unnecessary treatment due to misdiagnosis.

Key Words: White Sponge Nevus, White Lesion

1. Introduction

The white sponge nevus (WSN) is an autosomal dominant, hereditary genodermatosis that does not discriminate between gender and race.[1] This disease, which is seen due to mutations in the KRT 4 and KRT 13 genes responsible for the production of keratin proteins that protect the health and integrity of epithelial tissues, leads to keratin instability and causes hyperkeratotic lesions on nonkeratinized epithelial surfaces. [2] WSN can occur in the oral, esophageal, rectal, vaginal or anus mucosa. [3] Lesions are characterized by bilateral, white, thickened, velvety, folded and spongy appearance. The most commonly affected area in the oral mucosa is the buccal mucosa, while it is less frequently observed in the gingival mucosa and the floor of the mouth. [4] After WSN was first mentioned by Hyde in 1909, the first detailed report was made by Canon in 1935.[5] The prevalence of WSN in the literature is reported to be less than 1 in 200,000. Diagnosis usually relies on the distinctive clinical presentation and patient history. However, WSN may clinically resemble other oral white lesions, and in such cases, exfoliative cytological preparations or biopsy may be helpful for definitive diagnosis.[6]

2. Case

In October 2023, a 34-year-old systemically healthy male patient consulted to the Department of Oral and Maxillofacial Surgery of the Faculty of Dentistry of Recep Tayyip Erdoğan University due to toothache. During the intraoral examination, the patient was found to have poor oral hygiene, multiple deep dentin caries, and teeth indicated for extraction. The patient reported smoking two packs of cigarettes per day (≥ 40 cigarettes daily) and had no family history of similar lesions. It is not known how long the lesions have been present.
In the intraoral examination, asymptomatic, bilateral, diffuse, thick white plaques were identified on the buccal mucosa (Figure 1), the ventral and lateral surfaces of the tongue (Figure 2), the upper and lower labial mucosa (Figure 3 and Figure 4), as well as the soft palate mucosa extending into the oropharynx.

To differentiate the oral lesions from oral fungal infections, the patient was started on 100,000 IU/ml of Mycostatin antifungal treatment. A complete blood count and ELISA tests were ordered. On the same day, an incisional biopsy was taken from the buccal mucosa and sent for pathological examination. When the patient returned for a follow-up appointment one week later, no changes were noted in the lesions. Blood and ELISA tests showed no findings related to the lesions.

Pathological examination revealed significant acanthosis and parakeratosis in the stratified squamous epithelium, alongside vacuolization and focal cytoplasmic eosinophilic condensation in the basal and spinous layers, (Figure 5) which are characteristic features of white sponge nevus. The diagnosis of white spongiform nevus was made based on clinical and histological images. For the treatment, a protocol was implemented consisting of a 0.25% aqueous tetracycline mouth rinse (5 mL for 1 minute) twice daily for 12 weeks, as applied by Otobe et al.[7] The patient reported partial healing of the white plaques at the end of the 12-week treatment period but did not attend follow-up appointments.

3. Discussion

White sponge nevus (WSN) is considered a rare hereditary disorder that affects approximately 1 in 200,000 individuals. WSN lesions usually appear at birth or in early childhood, although they may sometimes develop during adolescence. [1,8,9]

WSN can occur intraoral, in the esophagus, rectum, vagina, or anus. The lesions are characterized by bilateral, velvety, white, thickened, convoluted, and spongy lesions predominantly found in the oral mucosa. In the oral cavity, these lesions are most commonly seen on the buccal mucosa, followed by the ventral surface of the tongue, labial mucosa, alveolar ridge, and the floor of the mouth.[10,11] In our case, diffuse, thick white plaques were detected in the buccal mucosa, the ventral and lateral surfaces of the tongue, and the lower and upper labial mucosa. No white plaque lesions were detected in any other region outside the oral mucosa.

White Spongy Nevus is a genetic disorder that is predominantly associated with mutations in the keratin 4 (KRT4) and keratin 13 (KRT13) genes. These two genes are responsible for the production of keratin proteins that maintain the health and integrity of epithelial tissues. KRT4 and KRT13 are found primarily in non-keratinized mucosa, such as the mouth, esophagus, and genital area. These mutations lead to a deterioration in the structure of the cells, resulting in the formation of thick, white plaques in non-keratinized mucosa.[12,13] In our patient, genetic testing was declined, and thus there are no test results available.

The characteristic clinical presentation of white sponge nevus consists of white plaques in the oral cavity, necessitating differentiation from other white lesions such as oral leukoplakia, focal epithelial hyperplasia (Heck's disease), proliferative verrucous leukoplakia, and even squamous cell carcinoma. It can also be excluded by failure to respond to antifungal agents to differentiate it from oral fungal lesions. Since WSN resembles other lesions, exfoliative cytological preparations or biopsy should be taken to avoid unnecessary treatment due to misdiagnosis.[6]

Histopathological findings of WSN include 1) thick-layered squamous epithelium exhibiting parakeratosis, 2) cytoplasmic clarification and vacuolization due to swelling of the cytoplasm in the stratum spinosum layer, and 3) nuclear condensation. In addition to these findings, eosinophilic cytoplasm can be seen in the perinuclear region.[14]

White sponge nevus typically does not require treatment in patients without aesthetic concerns, as the lesions are often asymptomatic. The literature does not present a common or definitive treatment method for WSN. Various treatment protocols have been reported that utilize different medications, such as antihistamines, nystatin[4], penicillin[15], tetracycline[16], and azithromycin[17], which have yielded partially or completely effective results. A literature review by Amores-Martín and colleagues examined the treatments used; they reported that protocols involving 0.25% tetracycline, 0.25% tetracycline combined with 200 mg doxycycline, and 500 mg amoxicillin achieved complete success. In our case, the treatment protocol using a 0.25% tetracycline solution (5 mL for 1 minute, three times daily for 12 weeks) showed partial improvement. This partial success may be attributed to tetracycline's modulation of epithelial keratinization.[16]

WSN is a benign developmental malformation that does not evolve into malignancy.[13] However, Haseth et al. reported that two out of 12 patients from four generations of a family developed oral squamous cell carcinoma associated with WSN.[12] Thomas et al. indicated that long-term prednisolone treatment could induce malignant transformation of WSN.[18] Additionally, Dan Liu et al. identified a new mutation in the KRT4 gene associated with malignant transformation in their reported WSN case. In a study on oral squamous cell carcinoma, downregulation of keratin 4 and keratin 13 was detected.[19] These studies show that genetic mutations observed in WSN do not always lead to benign outcomes, but may have malignant potential.

4. Conclusion

There is no established treatment protocol for white sponge nevus (WSN) in the literature. Treatment procedures have been followed using various drugs. However, it is unlikely that any treatment protocol will be completely effective unless the genetic structure of the lesions is taken into account. Due to its rarity, there are limited case studies and restricted datasets available in the literature regarding WSN. Future studies should include larger patient groups to better understand the clinical and genetic basis of WSN.

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Figure 1 : Vestibulum Oris

Figure 2: Lateral view of tongue (Left Side)

Figure 3 : Labial side of vestibulum oris

Figure 4 : Lateral view of tongue (Right side)

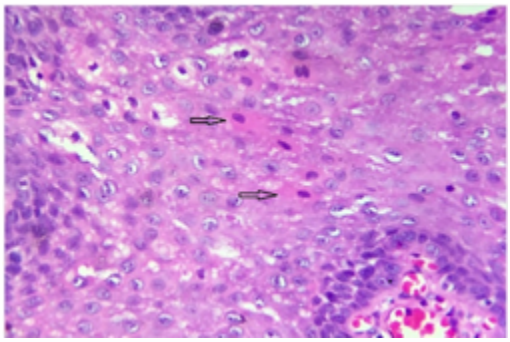

Figure 5 : In addition to acanthosis and parakeratosis in the mucosal stratified squamous epithelium, prominence in the basal layer, vacuolization in the spinous layer and focal cytoplasmic eosinophilic condensation (marked with an arrow) are seen.
HEX200

[PP-019]

PREVALENCE OF MANDIBULAR THIRD MOLARS IN TURKISH POPULATION: WINTER AND PELL&GREGORY CLASSIFICATION

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Abstract

- Objective: Extraction of impacted third molar is performed quite frequently in oral and maxillofacial surgery clinical practice. The aim of this study is to determine the frequency of the positions of impacted third molars in the Turkish population according to the Winter and Pell&Gregory classification.
- Materials and Methods: 1574 patients who applied for impacted mandibular third molar tooth extraction to Istanbul University Faculty of Dentistry, Department of Oral and Maxillofacial Surgery, and whose panoramic radiographs were taken at Istanbul University Faculty of Dentistry, Department of Oral and Maxillofacial Radiology, were examined. Existing impacted third molars were classified retrospectively according to Winter and Pell&Gregory classification.
- Results: According to the Winter classification, the most common types were mesioangular (600, 38.11%), followed by horizontal (476, 30.24%), vertical (398, 25.28%) and distoangular (100, 6.35%). According to Pell&Gregory classification, the most common ones are Class IIB (469, 29.79%), Class IIC (276, 17.53%), Class IB (229, 14.54%), Class IA (193, 12.26%). Class IC (177, 11.24%) Class IIA (154, 9.78%) Class IIIC (66, 4.19%) and Class IIIB (10, 0.63%). Class IIIA was not observed.
- Conclusion: In Turkish population, mesioangular, Class IIB and Class IIC angulation is most frequently observed in mandibular third molars.

- Key Words: mandibular third molar, Winter classification, Pell&Gregory classification

Introduction

Impacted teeth are teeth that do not take their place in the arch even though it is time to erupt. Mandibular impacted third molars are the most commonly impacted teeth in humans (1). Since impacted teeth cause many problems, the most frequently performed surgical procedure in oral and maxillofacial surgery clinical practice is the surgical extraction of impacted third molars. Problems such as pericoronitis, pain, caries, periodontal disease, cyst, tumor, external root resorption, cheek biting, bone loss in the adjacent tooth, food impaction are indications for the extraction of mandibular impacted third molar teeth (2, 3). Winter and Pell&Gregory classifications, which can be made through panoramic radiography, are frequently used to predict the difficulty of the surgical procedure (4).

Materials and Methods

Radiological examination:
Panoramic radiographs of all patients were obtained using a digital panoramic X-ray unit (Kodak 8000, Rochester, NY) with an exposure time of 13.2 seconds, set at 73 kVp, 5 mA.
Pell&Gregory classification:
The Pell&Gregory classification evaluates how embedded the third molar is in the mandible and where it is located in the mandibular ramus. The examined teeth were classified according to the Pell&Gregory classification.
Class I: There is sufficient distance between the second molar tooth and the ramus in the lower jaw
Class II: The distance between the distal of the second molar and the anterior surface of the mandible ramus is narrower than the mesio-distal diameter of the third molar.
Class III: There is no distance between the distal edge of the second molar and the anterior surface of the mandible ramus. The crown of the third molar remains completely inside the ramus and does not fit into the space.
Level A: The level of the highest point of the third molar is aligned with the occlusal plane of the second molar.
Level B: The highest point of the third molar is below the cervical line of the second molar but below the occlusal level.

Level C: The highest point of the third molar is below the cervical line of the second molar (5).

Winter Classification:

Winter's classification is evaluated according to the angle of the long axis of the tooth with the long axis of the second molar. . The examined teeth were classified according to the Winter classification.

1. Vertical: The long axis of the third molar is parallel to the long axis of the second molar
2. Mesial Oblique (Mezioangular): The long axis of the third molar makes an angle of approximately 45 degrees with the long axis of the second molar and is inclined forward.
3. Horizontal: The long axis of the third molar is horizontal, perpendicular to the long axis of the second molar.
4. Distal Oblique (Distoangular): The long axis of the third molar makes an angle of approximately 45 degrees with the long axis of the second molar and is inclined backwards (6).

Results

1574 teeth were examined in the study. In gender analysis, 67.16% of the patients were found to be female and 32.84% were male. The average age of women was 31.91, the average age of men was 27.61, and the general average age was 29.03. According to the Winter classification, the most common angulation was mesioangular (600, 38.11%), followed by horizontal (476, 30.24%), vertical (398, 25.28%) and distoangular (100, 6.35%) (Figure 1). According to Pell&Gregory classification, the most common angulations were Class IIB (469, 29.79%) and Class IIC (276, 17.53%) followed by Class IB (229, 14.54%), Class IA (193, 12.26%). Class IC (177, 11.24%) Class IIA (154, 9.78%), Class IIIC (66, 4.19%) and Class IIIB (10, 0.63%). Class IIIA was not observed (Figure 2).

Discussion

As a result of the study, the rate of female patients with mandibular impacted third molar was found to be 69.17% and the rate of male patients was 30.83%. This result is consistent with Jaroń A et al. It is similar to the results of Hashemipour et al., Hattab et al., Yıldırım et al. (7, 8, 9, 10). In our study, the average age of all patients was found to be 29.03±11.00. This result is similar to the average age reported for the eruption of mandibular wisdom teeth and is consistent with the literature (11, 12).

According to Winter's classification, we observed the most common mesioangular angulation. Then comes horizontal, vertical and distoangular angulation. Hassan et al, Syed et al, Çelikoğlu et al and Yıldırım et al observed the most mesioangular and the least distoangular angulation, completely similar to ours (9, 13, 14, 15). It is also important that our results are similar since Yıldırım et al and Çelikoğlu et al studied the Turkish population (9, 15).

In the Pell&Gregory classification, the most common mandibular impacted third molar was seen in the Class II Level B position. There are conflicting results in the literature regarding this. Similar to us, Hassan et al., Khouri et al., and Shaari et al. observed more Class II Level B positions (11, 13, 16). Jaron et al. and Jacques et al. reported that Class II Level A position is more common (10, 17).

Conclusion

In Turkish population, mesioangular, Class IIB and Class IIC angulation is most frequently observed in mandibular third molars.

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Figures

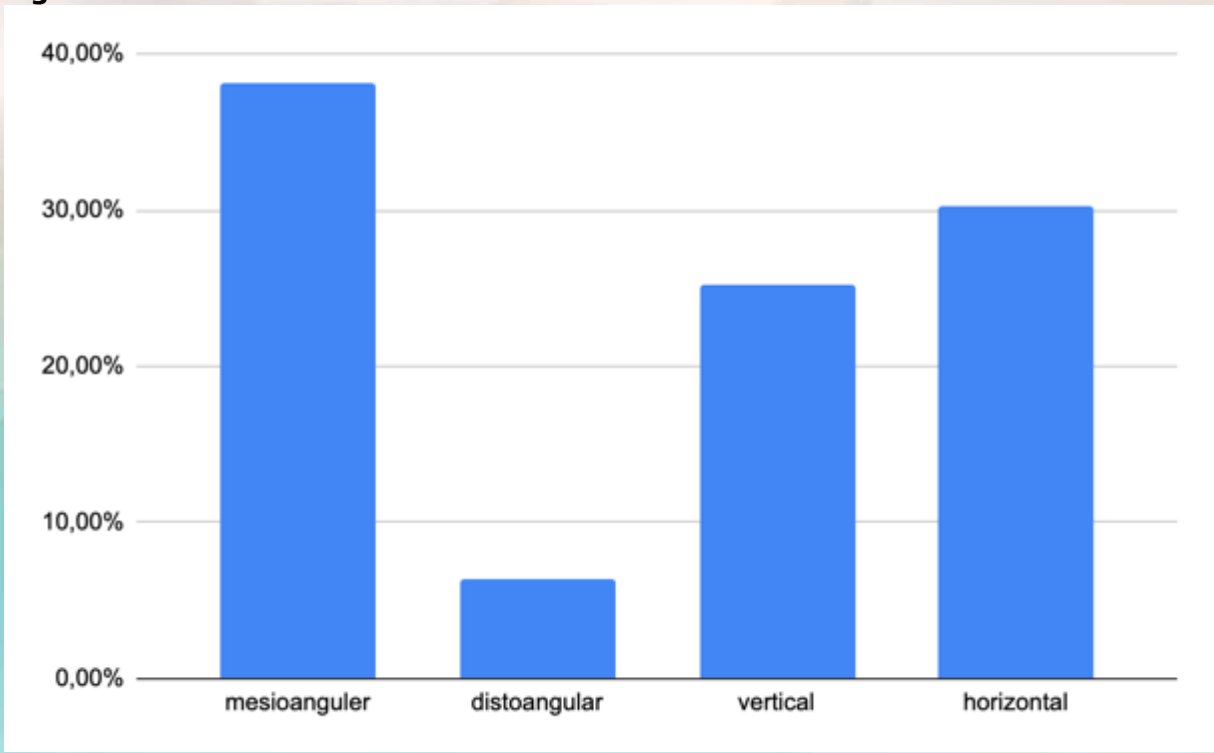

Figure 1. Impacted mandibular third molars according to Winter classification

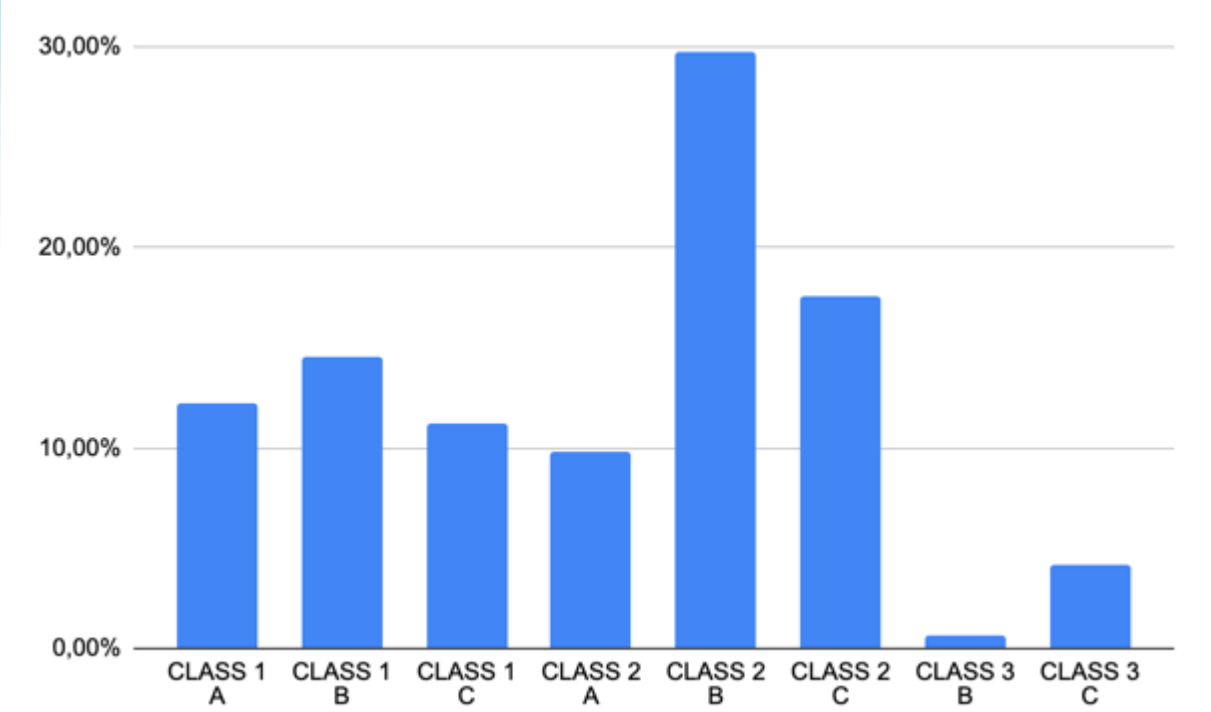

Figure 2. Impacted mandibular third molars according to Pell& Gregory classification

[PP-041]

TREATMENT OF GIANT CELL REPERATIVE GRANULOMA WITH INTRALESIONAL STEROID INJECTION

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Abstracts

Objectives: Giant Cell Reparative Granuloma (GCRG) is a rare lesion in the head and neck region, with the mandible and maxilla being the most commonly affected sites. Although GCRG is a benign lesion, it can be very aggressive and is typically treated with traditional surgical methods. Due to its benign nature, less aggressive treatment options are preferred over radical surgical approaches. For GCRG patients, intralesional steroid injection is available as an alternative to radical treatments. In this case, GCRG was treated with intralesional steroid therapy as an alternative to more aggressive treatment methods.

Case reports: A 42-year-old female patient presented to our clinic with complaints of pain and swelling in the lower right jaw. Radiological examination revealed a radiolucent lesion associated with the apex of tooth 47 and the mandibular canal. The biopsy confirmed the diagnosis of Giant Cell Reparative Granuloma (GCRG). A mixture of 3.5 ml triamcinolone and 3.5 ml of 0.5% Marcaine with 1/200,000 epinephrine (total 7 ml) was prepared. The steroid was injected in sufficient amounts into different areas of the lesion. This procedure was repeated weekly for 6 weeks.

Conclusions: Alternative treatment options should be considered alongside traditional therapies such as aggressive curettage and block resection for Giant Cell Reparative Granuloma (GCRG). Intralesional steroid injection is a safe and effective method, particularly for the treatment of non-aggressive GCRG lesions.

Key words: Giant cell reparative granuloma(GCRG), steroid, intralesional injection

1. Introduction

Giant cell reparative granuloma, also known as peripheral giant cell granuloma, giant cell epulis, osteoclastoma, or giant cell hyperplasia, is a rare reactive exophytic lesion of the oral cavity (1). It predominantly occurs in the head and neck region, particularly in the maxilla and mandible (2). It accounts for less than 7% of all benign lesions in the jaws (3). The World Health Organization defines it as an intraosseous lesion composed of cellular fibrous tissue. It contains multiple clusters of multinucleated giant cells and occasionally involves remnants of bone trabeculae. Because the lesion, typically described as a "giant cell reparative granuloma," can be destructive and aggressive, many pathologists prefer to avoid using this term (4). It is more commonly seen in children and adults aged between 2 and 25 years. The estimated incidence rate is 1.1 per million. Pain and numbness are rarely observed in patients (5). Intraorally, swelling and malocclusion may be present in the affected area. Radiologically, it appears as monolocular or multilocular radiolucent areas (6). The non-aggressive forms show slow, asymptomatic growth without perforating the bone and have a very low recurrence rate. In contrast, the aggressive forms cause rapid growth, pain, root resorption, and cortical bone perforation. Even after surgical curettage, the likelihood of recurrence is high (7). Treatment options include block resection, radiotherapy, interferon, curettage, systemic calcitonin, imatinib, bisphosphonates, denosumab, osteoprotegerin, and intralesional steroid injections (8).

2. Case Report

A 42-year-old female patient presented with a radiolucent lesion associated with the root of tooth 47 and the mandibular nerve in the right posterior mandible (Figure 1). An incisional biopsy was performed, and the lesion was diagnosed as Giant Cell Reparative Granuloma (GCRG). Laboratory analyses of parathyroid hormone, calcium, and phosphorus levels were conducted, ruling out hyperparathyroidism. The patient was treated using the protocol described by Terry and Jacoway (9). A mixture of 3.5 ml Kenacort-A and 3.5 ml of 0.5% Marcaine with 1/200,000 epinephrine (total 7 ml) was prepared. After the extraction of tooth 47, the mixture was injected as evenly as possible into the extraction site and through openings in the anterior bone using 10 ml needles. This procedure was repeated weekly for 6 weeks. The treatment process was monitored with radiographs taken every 6 months over a 30-month period (Figures 2-6).

3. Discussion

The traditional treatment for Giant Cell Reparative Granuloma (GCRG) involves surgical enucleation and resection. However, the recurrence rate can vary between 19% and 49% (10). Although aggressive curettage and block resection can reduce this rate, they may lead to significant tissue defects in large lesions. In young individuals, the loss of teeth or tooth follicles may be inevitable. In such cases, non-surgical options are recommended. Non-surgical methods such as radiotherapy, systemic calcitonin, intralesional steroid injections, bisphosphonates, and subcutaneous interferon alpha have been used (11). The use of corticosteroid injections as an alternative to surgery for treating giant cell tumors was first proposed by Jacoway and colleagues (12). Carlos and Senado explained that corticosteroid injections reduce bone resorption (13). Kurtz and colleagues created a mixture containing equal amounts of triamcinolone acetonide (10 mg/ml) and a local anesthetic with epinephrine (0.5% bupivacaine with 1:200,000 epinephrine), which they administered intralesionally each week for 6 weeks (14). Other studies on the use of corticosteroid injections suggest that a treatment duration of 6 months to 3 years is necessary for giant cell granuloma (11). The presence of calcified tissue was reported after 2 years of treatment (9). Our case was treated using a method similar to the protocol recommended by Terry and Jacoway (9), Kermer et al. (15), and Rajevan et al. (16), which involved 6 weeks of intralesional steroid injections. Before treatment, a biopsy must be performed to confirm the diagnosis. Additionally, blood levels of parathyroid hormone, calcium, and phosphorus should be measured to rule out hyperparathyroidism (17).

4. Conclusion

The conventional treatment for Giant Cell Reparative Granuloma (GCRG), which involves aggressive curettage and block resection, can result in the loss of vital tissues and functions. In cases with large lesions that may damage vital structures, intraoral steroid injections can serve as a reliable alternative to these treatment options. However, there are still gaps in the protocols regarding drug dosage adjustment and the determination of the treatment duration. More controlled clinical studies are needed to evaluate long-term follow-up and recurrence rates.

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6. Figures

Figure 1: Radiograph of the lesion associated with the mandibular canal and tooth root

Figure 2: Radiograph at the 6-month follow-up

Figure 3: Radiograph at the 12-month follow-up

Figure 4: Radiograph at the 18-month follow-up

Figure 5: Radiograph at the 24-month follow-up

Figure 6: Radiograph at the 30-month follow-up

[PP-055]

Posterior Mandibulada Khoury Tekniği İle Üç Boyutlu Alveoler Ogmentasyon: Olgu Sunumu

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ÖZET

Giriş: Diş çekiminden sonra, alveol kemiği farklı faktörlere bağlı olarak rezorbe olma eğilimindedir. Rezorbsiyon gelişen bu hastalarda mevcut kemik hacmi, implant uygulaması için yeterli olmayabilir. Bu durum hekimleri kemik genişliğini ve yüksekliğini arttırmaya yönelik yöntemleri kullanmaya yönlendirmektedir. Kombine yatay ve dikey kemik ogmentasyonu, yani 3D alveolar ogmentasyon olarak bilinen yöntemler, dental implantolojide en zorlu prosedürler arasında yer almaktadır. Khoury ve ark. sert dokuların 3 boyutlu olarak greftlemesinde kullanılmak üzere Shell(Khoury) tekniğini tanımlamışlardır. Teknik 1 mm kalınlığındaki otojen kemik plakaları mikrotitanyum vidalarla, plakalar arasındaki boşluklar otojen kemik greftleri ile doldurulacak şekilde sabitlenerek uygulanmaktadır.

Vaka raporu: Fakülte klinimiğize dişsizlik sebebiyle başvuran, 19-64 yaş aralığında 8 hastadan alınan konik ışınlı bilgisayarlı tomografi görüntüleri incelendiğinde mandibulasında vertikal ve horizontal kemik yetersizliğinin mevcut olduğu görüldü. Sabit implant destekli restorasyon yapılabilmesi için alveol kemiklerinde ogmentasyon ihtiyacı olan bu hastalara Shell tekniği ile horizontal ve vertikal kemik kazancı planlandı. Tüm hastalarda otojen blok kemikler piezo yardımıyla angulus bölgesinden alınmıştır. Otojen partiküller de kemik kazayıcı ile aynı donör alandan elde edilmiştir. 4-5 ay arası değişen bekleme periyodundan sonra hastalara ikinci cerrahi operasyon ile implantlar yerleştirildi.

Sonuç: 1 hastada implant yerleştirme aşamasında ek greftleme ihtiyacı gözlenmiş olup, 7 hastada implant yerleştirilmesi sırasında ekstra bir greftleme prosedürlerine gerek kalmadı.1 hastada ameliyat sonrası donör saha kaynaklı enfeksiyon görüldü. Antibiyotik kullanımının uzatılması ve drenaj ile kontrol altında alındı. Shell tekniği ile oluşturulan stabil biyolojik alan, greftlenen bölgede vital osteosit miktarını artırır ve greftin revaskülarizasyonu ile rejenerasyonunun kalitesini yoğunlaştırır. Osteoindüksiyon ve osteogenez potansiyeli, yeni kemik oluşumunu da hızlandırır ve bu nedenle allogreft ve xsenogereft ile yapılan augmentasyon tekniklerine kıyasla tedavi süresinin kısalmasına yol açar.

Anahtar Kelimeler: Mandibula, Horizontal ve Vertikal Ogmentasyon, Khoury Teknik

Three Dimensional Alveolar Ridge Augmentation with Khoury Technique in Posterior Mandible: Case Report

ABSTRACT

Objective: After tooth extraction, alveolar bone tends to resorb due to various factors. In patients where resorption occurs, the existing bone volume may not be sufficient for implant placement. This situation leads clinicians to use methods aimed at increasing bone width and height. Combined horizontal and vertical bone augmentation, also known as 3D alveolar augmentation, is among the most challenging procedures in dental implantology. Khoury and colleagues described the Shell technique to be used in the three-dimensional grafting of hard tissues. The technique involves fixing 1 mm thick autogenous bone plates with micro titanium screws, with the gaps between the plates being filled with autogenous bone grafts.

Case: In our faculty clinic, cone-beam computed tomography (CBCT) images of 8 patients aged between 19 and 64, who presented with edentulism, were examined. Vertical and horizontal bone deficiencies were observed in the mandibles of these patients. To achieve fixed implant-supported restorations, horizontal and vertical bone augmentation using the Shell technique was planned for these patients who required alveolar bone augmentation. In all patients, autogenous bone blocks were harvested from the angulus region with the help of a piezo device. Autogenous bone particles were also obtained from the same donor site using a bone scraper. After a waiting period of 4-5 months, implants were placed during a second surgical procedure.

Conclusion: In one patients, the need for additional grafting was observed during the implant placement phase, while no extra grafting procedures were required for the other seven patients. one patient had postoperative donor site infection. It was controlled with prolonged antibiotic use and drainage. The stable biological space created using the Shell technique increases the amount of vital osteocytes in the grafted area and enhances the quality of the graft's revascularization and regeneration. The potential for osteoinduction and osteogenesis also accelerates new bone formation, which leads to a shorter treatment time compared to augmentation techniques using allografts and xenografts.

Key Words: Mandible, Horizontal and Vertical Augmentation, Shell Technique

GİRİŞ

Dental implant uygulamalarında başarılı sonuçlar elde edebilmek için yeterli miktarda ve kalitede kemik dokusuna sahip olmak büyük önem taşır. Ancak periodontal hastalıklar, travmalar veya diş kayıplarına bağlı olarak çene kemiğinde meydana gelen hacim kayıpları, implant uygulamalarını zorlaştırabilmektedir. Bu noktada kemik greftleme teknikleri, eksik kemik dokusunun yeniden oluşturulması için önemli bir çözüm sunmaktadır.

Khoury tekniği, bu alanda özellikle dikkat çeken bir yöntem olarak öne çıkmaktadır. Dr. Fouad Khoury tarafından 1990'lı yıllarda geliştirilen bu teknik, mandibula ve maksillada büyük kemik defektlerinin onarımı ve kemik hacmi yetersizliği olan bölgelerde implantasyonun mümkün kılınması amacıyla tasarlanmıştır. Geleneksel greftleme yöntemlerinden farklı olarak, Khoury tekniği, ince otolog kemik bloklarının kullanılmasıyla, hem vertikal hem de horizontal yönde kemik genişletilmesi sağlayarak, daha stabil ve uzun vadeli sonuçlar elde edilmesine olanak tanır. Khoury tekniğinin temel prensibi, kemik bloklarının donör bölgeden (genellikle ramus veya simfizis bölgesi) alınarak, eksik bölgeye vidalar aracılığıyla yerleştirilmesi ve bu blokların arasında yer alan boşlukların partikül kemik greftleriyle doldurulmasıdır. Bu teknik, greft rezorpsiyonunu minimize ederken, iyileşme sürecini de optimize eder ve osteointegrasyonun daha hızlı ve stabil bir şekilde gerçekleşmesine yardımcı olur[1]. Bununla birlikte, doğru hasta seçimi ve cerrahi planlama, komplikasyon risklerini en aza indirmek açısından kritik öneme sahiptir. Bu çalışmada, dişsizlik şikayetiyle başvuran ve mandibulalarında dental implant yerleştirmek için yeterli kemik hacmine sahip olmayan, yaşları 19 ile 64 arasında değişen 8 hastada Khoury tekniği kullanılarak gerçekleştirilen horizontal ve vertikal ogmentasyon sonuçları değerlendirilecektir. Ayrıca, bu tekniğin etkinliği ve uygulanabilirliği literatür verileri ışığında bir olgu sunumu ile tartışılacaktır.

OLGU RAPORU

Bu çalışmada değerlendirilen olgular, 2021-2024 yılları arasında fakülte kliniğimizde tedavi edilen, yaşları 19 ile 64 arasında değişen 4 kadın ve 4 erkek hastadan oluşmaktadır. Tüm hastalara cerrahi müdahaleden 30 dakika önce 1 gr intramüsküler sefazol ve 125 mg intravenöz metilprednisolon uygulanmıştır. İşlem öncesinde ağız boşluğu, hastalara bir dakika boyunca seyreltilmiş povidon-iyot ile çalkalatılarak dezenfekte edilmiştir. Tüm cerrahi işlemler, lokal anestezi altında gerçekleştirilmiştir. Fleplerin gerilimsiz kapatılmasını sağlamak amacıyla, bukkal ve lingual fleplerde esnetme işlemi yapılmıştır. İntraoral donör alan olarak ramus mandibula seçilmiş ve piezo cerrahisi kullanılarak gerekli miktarda blok kemik greftleri elde edilmiştir. Blok kemikler, cerrahi piyasemene elmas separe takılarak ikiye ayrılmış ve gerekirse kemik kazıyıcı ile inceltilerek yaklaşık 1 mm kalınlığa getirilmiştir. Aynı donör bölgeden otojen kemik partikülleri de kemik kazıyıcı yardımıyla toplanmıştır.

Greftleme yapılacak bölgenin bukkal kısmına yerleştirilecek kortikal plağın stabilitesini artırmak için horizontal hatta bir oluk oluşturulmuştur. Kortikal plak, dışarıda drill ile iki noktadan delinmiş, ardından stabilize edileceği bölgeye yerleştirilerek kemikte delik açılmış ve 1.6 mm çapında vidalarla pasif fiksasyon sağlanmıştır. İki hastada lingual bölgeye de kortikal plak aynı şekilde yerleştirilmiş, üç hastada ise alveol kret tepesine kapak şeklinde kortikal plak uygulanarak stabil bir yapı oluşturulmuştur. Bu stabilize edilmiş alanlara, toplanan otojen kemik greftleri sıkıca yerleştirilmiştir.

Flepler, başlangıçta 4.0 Vicryl sütür kullanılarak horizontal matris dikişlerle, ardından 5.0 Prolen sütürlerle basit dikişlerle kapatılmıştır. Operasyon sonrasında hastalara 10 gün boyunca günde 2 kez amoksisilin/klavulanik asit ve NSAII grubundan bir analjezik ile klorheksidin içeren gargara reçete edilmiş. Sütürler 10. günde alınmıştır. Ortalama 4-5 ay arasında değişen bekleme sürelerinin ardından hastalara dental implantları yerleştirilmiş olup, yalnızca iki hastada implant yerleştirme sırasında ek greftleme prosedürlerine ihtiyaç duyulmuştur.

TARTIŞMA

Kemik rejenerasyonuna yönelik cerrahi işlemlerde, başarıyı artırmak için belirli biyolojik ve teknik ilkelerin dikkatle uygulanmasını gerektirir. Wang ve arkadaşlarının tanımladığı gibi, PASS (Primary wound closure, Angiogenesis, Space maintenance, Stability of the wound) kriterlerinin yerine getirilmesi, yönlendirilmiş kemik rejenerasyonunda (GBR) daha öngörülebilir sonuçlar elde edilmesini sağlamaktadır[2]. Bu çalışmada uygulanan Khoury tekniğinde, bu dört temel ilke dikkatle takip edilmiştir. Fleplerin gerilimsiz kapatılması, primer kapanmayı sağlayarak greft bölgesinin mikroorganizmalardan ve mekanik travmalardan korunmasına yardımcı olmuştur. Greft materyalinin stabilize edilmesi, alan koruma ve kan pıhtısının stabilitesini sağlamak açısından kritik rol oynamıştır. PASS kriterlerinin yerine getirilmesi, bu çalışmada görülen düşük komplikasyon oranlarının temel nedenlerinden biridir. Literatürde bildirilen komplikasyon oranları ve greft kayıplarının, bu tür rejeneratif cerrahilerde uygun teknik uygulamalarla minimize edilebileceği vurgulanmaktadır.

Khoury tekniğinde kullanılan ince otolog kemik blokları, yalnızca kemik hacmini artırmakla kalmamış, aynı zamanda geniş yüzey alanı sunarak greftin osteokondüktif potansiyelini artırmıştır. Literatürde de belirtildiği gibi, mandibular kemik bloklarının inceltilmesi, revaskülarizasyon sürecini hızlandırarak kemik rejenerasyonunu teşvik etmektedir[3-4]. Bu çalışmada kullanılan yöntem, bu bulgularla uyumlu olarak, başarılı bir kemik rejenerasyonu ve stabilizasyon sağlamıştır. Khoury tekniğinin en önemli avantajı, otojen kemik bloklarının kullanılmasıdır. Otojen kemik greftleri, özellikle vertikal alveolar sırt ogmentasyonu için altın standart olarak kabul edilmektedir[5]. Literatürde de belirtildiği gibi, otojen greftler osteoindüktif, osteokondüktif ve osteojenik özelliklere sahip olup, greftin hızlı bir şekilde entegrasyonunu sağlar [6].
Khoury ve ark.[7] tarafından 17 yıla kadar takip edilen 117 hasta ve 128 greftlenmiş bölge üzerinde yapılan araştırmada, ameliyat sonrası ortalama dikey kemik kazanımı 7,6 ± 3,1 mm olarak kaydedilmiş ve ameliyat sonrası ortalama kemik genişliği 8,1 ± 1,6 mm'ye ulaşmıştır. Ayrıca, 10 yıl sonra ortalama dikey kemik kazanımının 6,72 ± 2,26 mm seviyesinde sabit kaldığı ve rezorpsiyon oranının %11,4 olduğu gösterilmiştir. Bu veriler, Khoury tekniğinin uzun vadeli kemik stabilitesi ve implant başarısı açısından güvenilir bir yöntem olduğunu kanıtlamaktadır. Bizim olgularımızda, ameliyat sonrası ve üçüncü ayda elde edilen tomografi görüntülerinden yapılan ölçümlerde standardizasyon sağlanamamış olup, kemik kazanımları ve kayıpları milimetrik olarak değerlendirilememiştir. Bununla birlikte, 7 hastada başlangıçtaki kemik hacmine kıyasla implant uygulanabilir düzeyde kemik kazanımı gözlenmiştir. Bu durum, diğer ogmentasyon tekniklerine kıyasla daha kısa sürede implantasyon yapılmasına olanak sağladığı için Khoury tekniğini tercih etmemizin önemli bir sebebini ortaya koymaktadır.

Khoury tekniğinin en büyük dezavantajlarından biri, cerrahi deneyim gerektiren karmaşık bir prosedür olmasıdır. Cerrahi sırasında greftlerin uygun şekilde hazırlanması, stabilize edilmesi ve fleplerin gerilimsiz kapatılması, başarının anahtar faktörleridir. Ayrıca, otojen kemik grefti alınması, ikinci bir cerrahi alanın oluşmasına neden olur. Bu durum, donör bölgede ağrı, şişlik ve potansiyel komplikasyonlara yol açabilir. Otolog kemik elde edildiğinde bir travmaya neden olunduğu açıktır, bu nedenle sınırlı donör bölgeleri veya potansiyel sinir hasarı riski olan durumlarda Khoury tekniğinden kaçınılmalıdır ve membranların kullanımı tamamlayıcı bir seçenek olacaktır. Öte yandan, Khoury'nin tekniğinde konak tepkilerini tetikleyebilecek ve rejeneratif eylemin sonuçlarını etkileyebilecek eksojen materyaller kullanılmamaktadır[8,9].
Bu bağlamda, sentetik greft materyalleri veya allojenik greftler, ikinci bir cerrahi alan gerektirmemesi nedeniyle bazı durumlarda tercih edilebilir. İşlem süresinin uzun olması ve cerrahi ekipman gereksinimleri nedeniyle zaman alıcı ve maliyetli olabilir. Buna ek olarak, bu tekniğin başarı oranları yüksek olsa da, her hasta için uygun olmayabilir ve ileri derecede rezorbe olmuş kemik defektlerinde ek greftleme prosedürlerine ihtiyaç duyulabilir.

SONUÇ

Khoury tekniği, dental implant uygulamaları öncesinde yeterli kemik hacmi sağlamak amacıyla kullanılan güvenilir ve etkili bir kemik greftleme yöntemidir. Bu çalışmada, 19 ile 64 yaşları arasındaki hastalarda hem horizontal hem de vertikal kemik ogmentasyonunu başarıyla gerçekleştirdiğimiz Khoury tekniği, otojen kemik greftlerinin kullanımının kemik rejenerasyonu ve stabilizasyonu üzerindeki olumlu etkilerini

ortaya koymuştur. Uzun vadede elde edilen yüksek başarı oranları ve düşük komplikasyon riskleri, bu tekniğin 3D kemik rekonstrüksiyonu için öngörülebilir sonuçlar sunduğunu doğrulamaktadır. Ancak, cerrahi deneyim gerektiren karmaşık bir prosedür olması ve ikinci bir cerrahi alanın oluşması gibi dezavantajlar, hasta seçimi ve planlama sürecinde dikkat edilmesi gereken önemli faktörlerdir..

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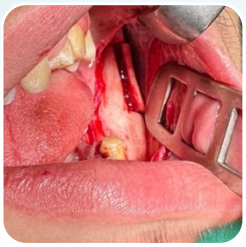
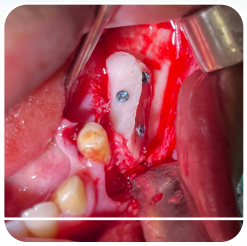
Resimler

Vaka 1: 19 Yaş, Erkek



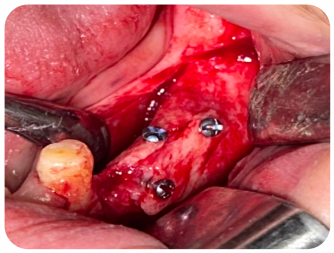
Şekil1: Ramustaki blok greftin ayrılmadan önceki hali

Şekil2: Greftin ikiye bölünüp, 1mm kalınlığa getirilmiş hali.

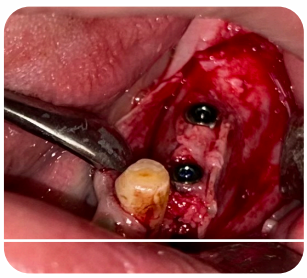


Şekil3:Kortikal plakaların sabitlenip otojen greftle yapılan ogmentasyon

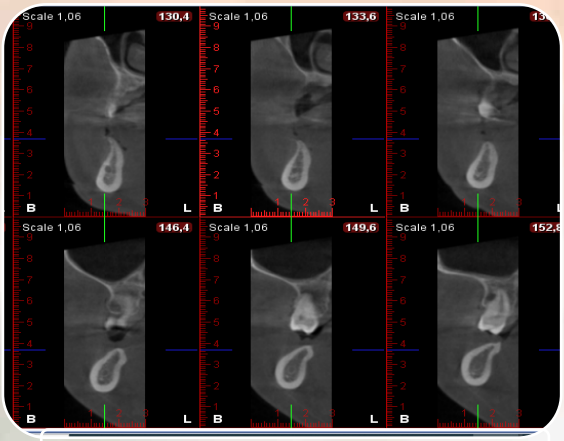
Şekil4: Postoperatif opg



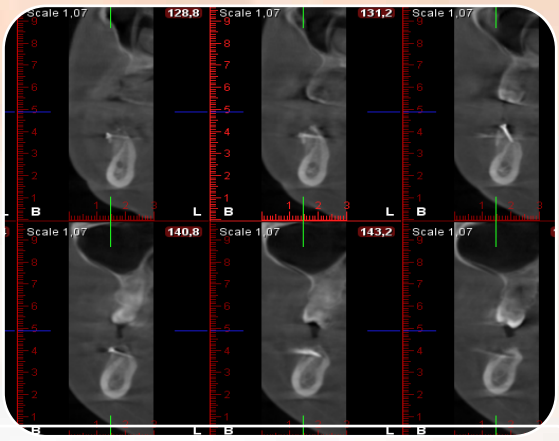
Şekil5:Postoperatif 4. ay



Şekil6:
36- 4.1 çap 10 boy nucleoss T6
37- 4.1çap 8 boy nucleoss T6



Şekil6:Operasyon öncesi

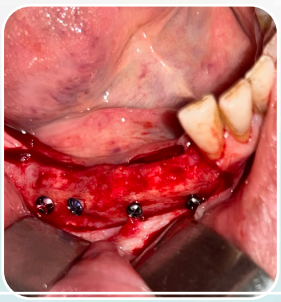


Şekil7:Operasyondan sonra 4.Ay

Vaka2: 63 Yaş, Erkek

Şekil8: Kortikal plakların horizontal ogmentasyon için fiksasyonu

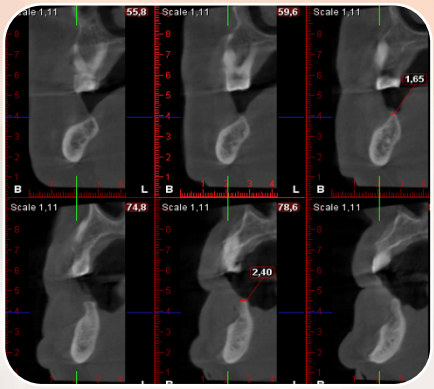
Şekil9: Otojen partiküllerle aradaki boşluğun doldurulması



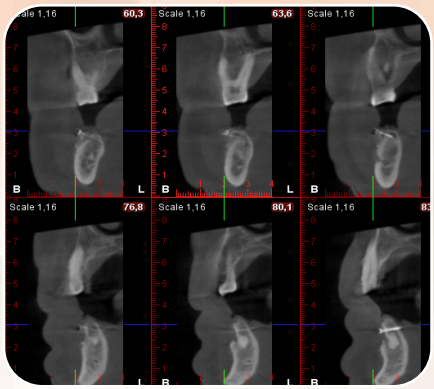
Şekil10: Operasyondan sonra 5.ay

Şekil11: nucleoss T6
43- 3,5 çap 10 boy
44- 3.5 çap 10 boy
46- 4.1 çap 8 boy
47- 4.1 çap 8 boy

Şekil12: İmplantlar yerleştirildikten sonra opg



Şekil13: Operasyon öncesi

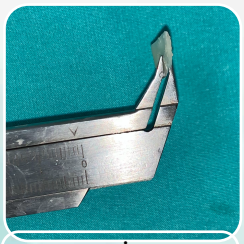


Şekil14: Operasyondan sonra

Vaka3: 39 Yaş, Kadın

Şekil15: Kret tepesinin inceliğine dikkat çekilmektedir.

Şekil16: Kortikal plakların bukkalde stabilizasyonu için horizontal bir oluk açılması



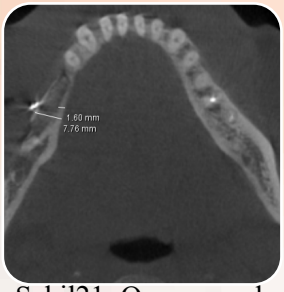
Şekil17: İkiye ayrılan kortikal plağın 1mm inceliğine dikkat çekilmektedir

Şekil17: Bukkale plağa yerleştirilip, otojen partiküller aradaki boşluğa yerleştirilmiştir

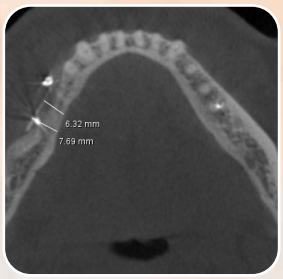
Şekil18: Kortikal plak kret tepesine yerleştirildi fakat fiksasyon yapılmadı

Şekil19: 5. ay

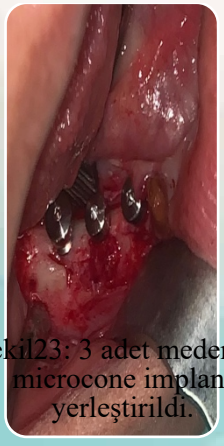
Şekil20: Operasyondan önce axial kesit



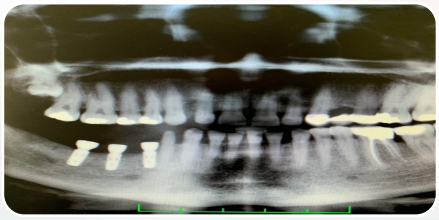
Şekil21: Operasyondan sonra



Şekil22: Operasyondan sonra 5. Ay

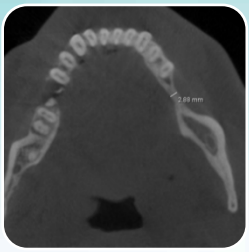


Şekil23: 3 adet medentika microcone implant yerleştirildi.

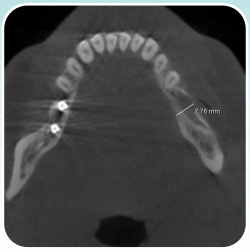


Şekil24: İmplantlar yerleştirildikten sonra opg

Vaka4: 31 Yaş, Erkek



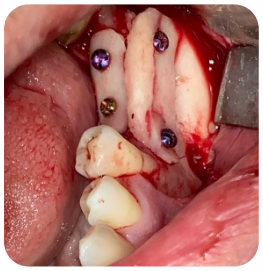
Şekil25: Operasyon öncesi aksiyal kesit



Şekil26: Operasyon sonrası 3.Ay

Şekil27:Eksternal oblik sırt bölgesinden greft alınması

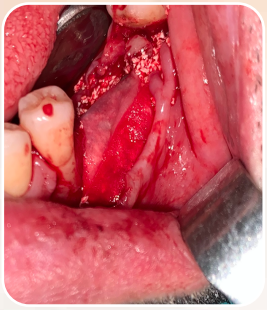
Şekil28: Kret tepesindeki kapağın tam fiksasyonu öncesi greft yerleştirilmesinin gösterilmesi



Şekil29:Kutu şeklindeki ogmentasyon

Şekil30:5.Ayda greftlerin bir kısmı rezorbe olmuştur.

Şekil31:Greft rezorbsiyonundan dolayı 36 nolu implantın bukkal yivleri açıkta kalmıştı fakat primer stabilitesi iyiydi.



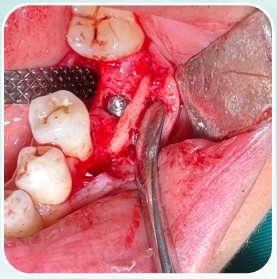
Şekil32:İlgili bölgeye xsenogreft ve membran uygulanması

Şekil33:İmplantasyondan sonra OPG

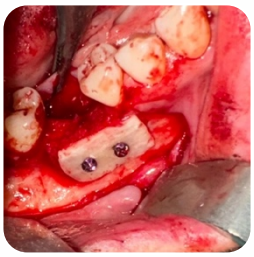
Vaka5: 45 Yaş, Kadın

Şekil34: 36 nolu bölge horizontal ogmentasyon

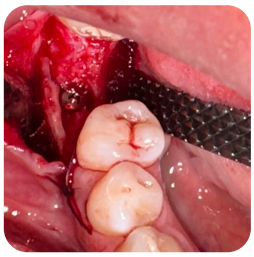
Şekil35: 4.ay



Şekil36: Medentika 4.0 çap 8 boyunda microcone



Şekil37: 46 nolu bölgede horizontal ogmentasyon



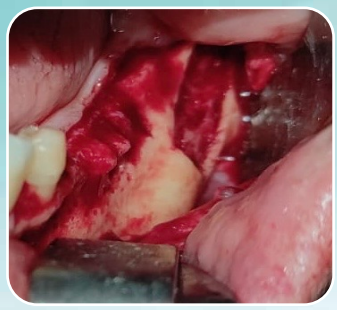
Şekil38:4.Ayda medentika microcone 4.0 çap 8 boyunda implantın yerleştirilmesi

Şekil39: implantasyondan sonra OPG

Şekil40: Operasyon öncesi axial kesit

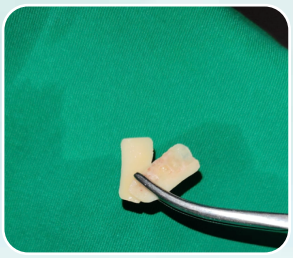
Şekil41: 4. ay axial kesit

Vaka6: 64 Yaş, Erkek



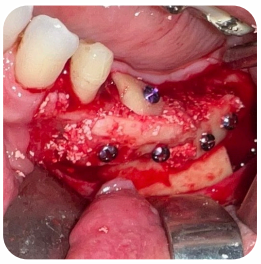
Şekil42: Greft alınan ve greftlenecek 35-37 arası alan

Şekil43:Çıkarılan blok greft ve kemik kazıyıcı ile kazınan otojen partikül greft

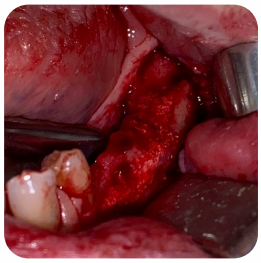


Şekil44:Ramustan elde edilen kortikal bloğun ikiye bölünmüş hali

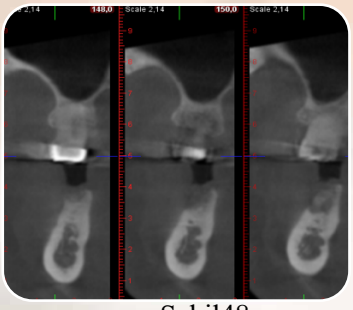
Şekil45:Kortikal plakların horizontal mesafe bırakılarak yerleştirilmesi



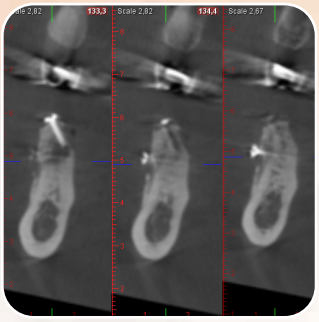
Şekil46: 35 nolu bölgedeki vertikal ogmentasyon için kortikal kapak ve otojen partiküller



Şekil47:4.ay vidalar söküldü.İmplant yerleştirilmeye hazır hale getirildi



Şekil48: Operasyondan önce 35 nolu bölge



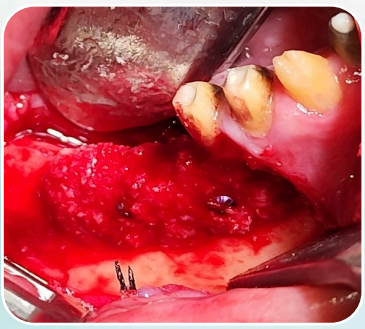
Şekil49: 35 nolu bölge 4.ay

Şekil50: 35-37 nolu bölgeye 4.0 çapında 10 boyunda medentika microcone implanlar yerleştirildi.

Vaka7: 52 Yaş, Kadın

Şekil51: Bıçak sırtı kret tepesi ve greftlencek alandaki kökün çıkarılması.

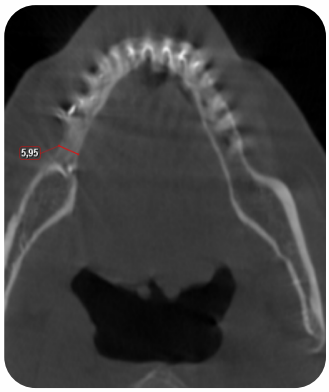
Şekil52: Greftin chisel ile bölgeden ayrılmadan önceki hali



Şekil53:Çıkarılan kortikal plağın inceltikdikten sonra bukkal bölgeye vertikal ve horizontal mesafeyi arttıracak şekilde yerleştirilip, araya otojen greft partiküllerinin yerleştirlip bukkal alana da taşan otojen partiküller izlenmekte

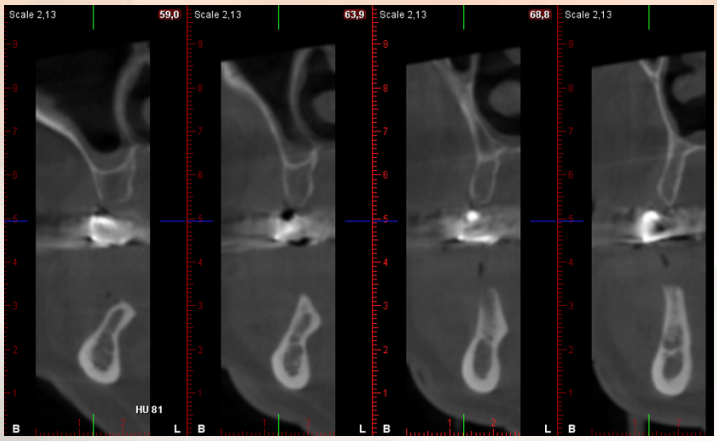
Şekil54: Operasyondan önce 46 nolu bölge

Şekil55:Axial kesitte gözlenen horizontal yetersizlik

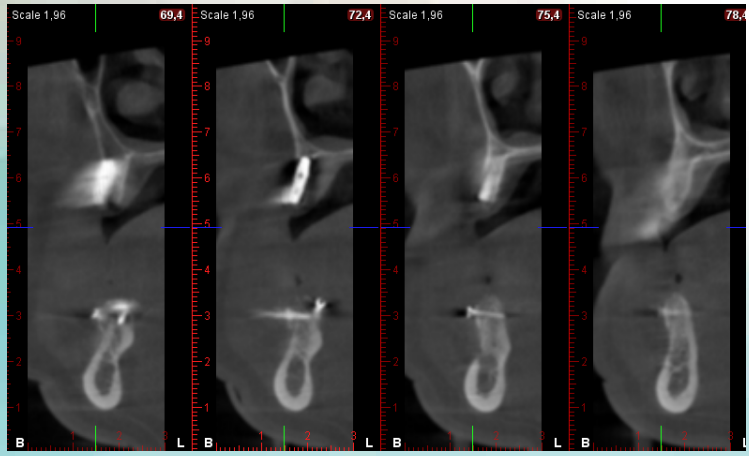


Şekil 56:Operasyondan sonra 4. aydaki horizontal kazanım izlenmektedir

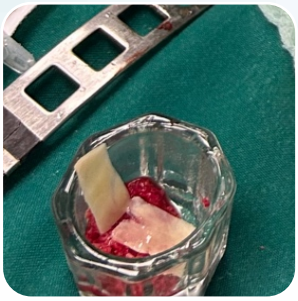
Vaka8: 55 Yaş, Kadın



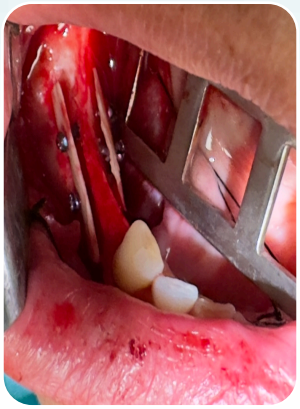
Şekil 56: Vertikal ve horizontal yetersizlik izlenmektedir



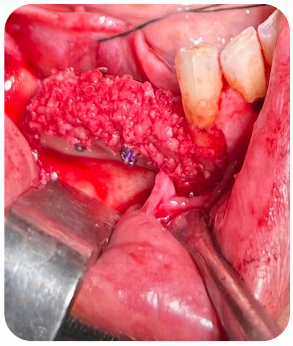
Şekil 57: Operasyon sonrası 4.ay alınan CBCT



Şekil58: Kortikal plaklar ve otojen greft partiküller



Şekil59: Kortikal plaklar eşit horizontal ve vertikal ogmentasyon hem bukkal hem lingual kortekse sabitlenmiştir



Şekil60: Otojen partiküller oluşturulan kutu şeklindeki boşluğa yerleştirildi

[PP-061]

UNICYSTIC AMELOBLASTOMA: A CASE REPORT

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Abstract

Objectives: Ameloblastoma is a benign tumor that grows slowly and is locally invasive. Unicystic ameloblastoma(UA), a rare type of ameloblastoma, first described in 1977, presents with clinical and radiological features similar to odontogenic cysts. It may show different histological growth patterns but always contains typical ameloblastomatous epithelium. This type generally has a benign course and responds well to conservative treatments such as enucleation. Unicystic ameloblastoma predominantly affects younger populations and is commonly show in the posterior mandible. In the present case conservative treatment in a 20 year-old male patient with ameloblastoma is described.

Case report: A 20-year-old male patient was referred to the department of oral and maxillofacial surgery with a complaint of growing swelling in the area of the left mandible. Conic beam computed tomography(CBCT) showed a well-defined unilocular radiolucency with sclerotic margins in the body of the mandible lower border extending from the mesial aspect of 33 to 37. Based on the patient's history, clinical findings, the diagnosis was given as odontogenic cyst. Under general anesthesia, enucleation and curettage of the lesion was performed. Mural-type unicystic ameloblastoma was diagnosed histopathologically.

Conclusion: Unicystic ameloblastoma mainly affects younger patients and can only be diagnosed through histopathological analysis. Clinical and radiological features are not enough(spesifik vb bir şey) for diagnosis. It is generally less aggressive and treated conservatively.

Key words: unicystic ameloblastoma, mandible, enucleation.

Introduction

Ameloblastoma is a benign tumor which is locally invasive and growing slowly. (1). It is an odontogenic tumor originating from the germ and epithelial residues of the erupting tooth, odontogenic cyst epithelium and possibly basal epithelial cell(2). Unicystic ameloblastoma is a rare type of ameloblatoma with similar clinical and radiological features to odontogenic cysts. It was first described by Robinson and Martinez in 1977. However, histologically, it may contain luminal, intraluminal and mural tumor proliferation, but independently it contains typical ameloblastomatous epithelium(3,4). Unicystic ameloblastoma generally displays a benign biological behavior and responds favorably to conservative treatments such as enucleation, curettage, and marsupialization, making it a distinct entity. Unicystic amelobalstoma accounts for approximately 15% of ameloblastomas. Unicystic ameloblastoma frequently affects juveniles and males with mild dominance. They are usually diagnosed in the 2nd decade of life. It is often seen in the posterior mandible (4,5,6).

Case Report

A 20-year-old male patient was referred to the department of oral and maxillofacial surgery with a complaint of swelling growing in the area of the left mandible. Intraoral examination revealed residuel roots of 36 and also slight expansion was observed in the relevant area. CBCT and panoromic radiography(Figure 1) showed a well-defined unilocular radiolucency with sclerotic margins in the body of the mandible approaching the lower border extending from the mesial aspect of 33 to 37. As a result of the aspiration biopsy, the findings were in consistence with a cystic lesion. Based on the patient's history, clinical findings, the diagnosis was given as odontogenic cyst. Under general anesthesia, enucleation and curettage of the lesion was performed. Histopathological examination (Figure 2a, 2b) revealed an epithelium-lined cystic formation characterized by columnar cells arranged in a hedge-like manner in the basal layer cells in sections of the material. The upper layers of the epithelium had the structure of loose stellate reticulum. Tumor tissue that developed in the form of islands was observed in the connective tissue. The cells that made up the periphery of the islands were columnar and showed reverse polarization. Squamous changes had been observed in some of the islands, which were characterized by stellate reticulum-like cells in the center. As a result of these evaluations, mural type unichistic ameloblastoma was diagnosed. No recurrence was observed in the 3rd, 6th and 9th month follow-ups (Figure 3).

Discussion

The epithelium of uncystic ameloblastomas is mostly ununiform and covered with odontogenic cyst-like nonspecific epithelium. Biopsies involving only this type of epithelium may not accurately reflect the nature of the lesion (4,6,7). Such biopsies can lead to misdiagnosis and consequently inadequate treatment. In contrast, unicystic ameloblastomas frequently mimic cystic lesions both clinically and radiographically. The absence of a biopsy, combined with a diagnosis based solely on clinical and radiographic assessments, can result in significant diagnostic challenges, potentially leading to either overestimation or underestimation of the lesion(8,9). Compared to their solid counterparts, unicystic ameloblastomas generally exhibit more favorable clinical behavior and treatment response(3,4,8). Therefore, conservative treatment is recommended, particularly for younger patients, given the severe effects on jaw development, masticatory function, facial growth, and psychosocial factors(5,8-12).

Conclusion

Unicystic ameloblastoma typically affects young adolescent patients. Diagnosis of unicystic ameloblastoma relies solely on histopathological characteristics and cannot be accurately determined based on clinical and radiological findings alone. To ensure an accurate final diagnosis, the entire lesion must be examined by sectioning at different levels. Unicystic ameloblastoma is considered to be less aggressive and is generally recommended for conservative treatment

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Figures

Figure 1: Panoromic radiography of the lesion

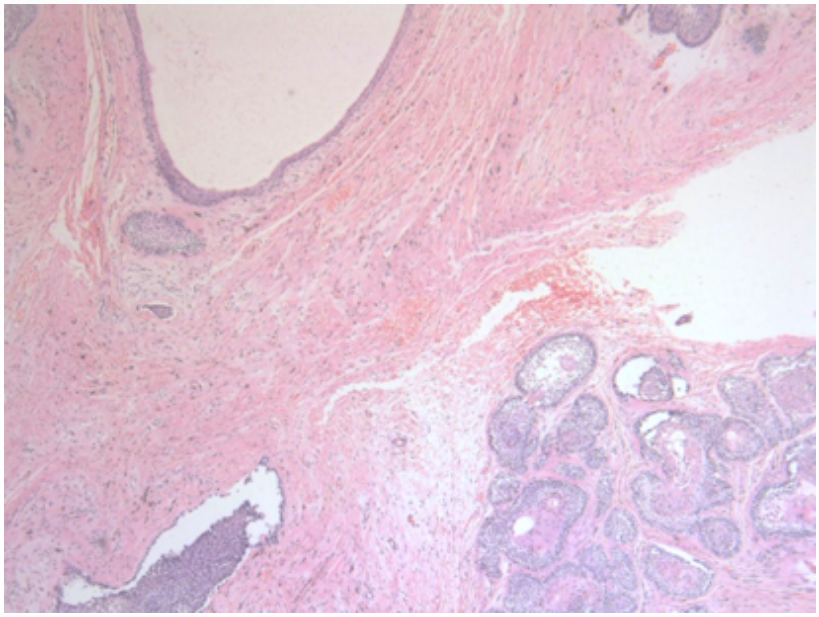

Figure 2a: Hematoxylin and Eosin(H&E) Stain,original magnification x40

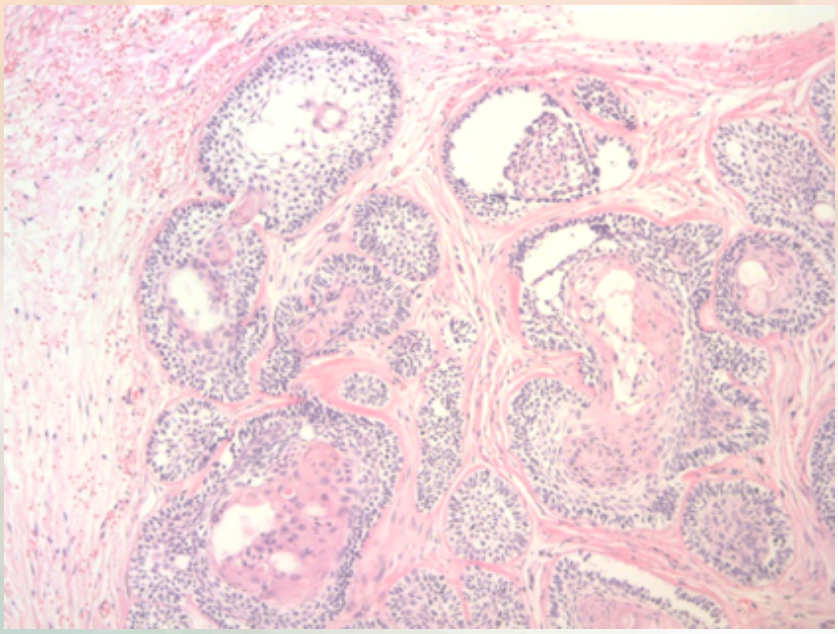

Figure 2b: Hematoxylin and Eosin(H&E) Stain,original magnification x100

Figure 3: 9th month follow-up panoramic radiograph

[PP-062]

IDIOPATHIC GINGIVAL FIBROMATOZIS: CASE REPORT

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Abstract

Objectives: Idiopathic Gingival Fibromatosis (IGF) is a rare, slowly progressive, and benign gingival condition characterized by the excessive enlargement of gingival tissue without an identifiable systemic or genetic cause. IGF typically presents as a non-inflammatory, fibrous overgrowth of the gingiva, which can obscure dental crowns, affect normal oral functions, and have psychological impacts on patients.

Case report: A 30-year-old female patient with a painless swelling in the lingual region of the right mandible. Intraoral examination revealed a tight, pink colored, non-bleeding pedicled soft tissue in the mandibular lingual region, extending from the midline to the posterior of the ramus, at the occlusal level of the teeth. The lesion was removed by excisional biopsy under local anesthesia. On histopathological examination the lesion was diagnosed as fibromatosis.

Conclusion: Patients diagnosed with idiopathic gingival fibromatosis do not present with a familial history of gingival hyperplasia and lack identifiable causative factors, such as pregnancy, medications, or systemic conditions. Upon thorough exclusion of all known etiological factors contributing to gingival enlargement, a diagnosis of idiopathic gingival fibromatosis may be established. The recurrence of idiopathic gingival fibromatosis is characterized by unpredictability, with a higher prevalence noted in pediatric and adolescent populations in comparison to adults.

Key words: Excision, fibromatosis, idiopathic.

Introduction

Gingival fibromatosis (GF) is a condition where the gingiva progressively enlarge due to increased submucosal collagen in the connective tissue(1,2). GF can be either hereditary or idiopathic. Unlike similar fibromatoses found in other body areas, GF specifically affects the gums(3). Idiopathic gingival fibromatosis (IGF) is a rare, benign, and slow-growing condition, typically painless and non-bleeding, that causes fibrous gum tissue overgrowth, often covering tooth surfaces and leading to tooth misalignment(4,5).

Gingival enlargement is attributable to the augmented deposition of extracellular matrix (ECM), specifically interstitial collagen type I, which constitutes a primary component of the ECM within gingival connective tissue(6). The composition of this matrix is governed by the equilibrium between the synthesis and degradation mediated by matrix metalloproteinases. The heightened production and diminished degradation of ECM is postulated to be induced by transforming growth factor β1 (TGF-β1), a cytokine recognized as a significant mediator of wound healing and tissue regeneration(7).

The enlargement in IGF is linked to an excess buildup of extracellular matrix (ECM), mainly type I collagen, which is a primary ECM component in the gums(6). Normally, the balance of ECM formation and breakdown is regulated by matrix metalloproteinases, but in IGF, increased ECM production and decreased

breakdown are thought to be influenced by transforming growth factor β1 (TGF-β1), a cytokine involved in wound healing and tissue repair(7).

Unlike hereditary forms, idiopathic cases are generally sporadic and do not follow a genetic pattern. Histologically, IGF is marked by the growth of dense fibrous tissue and increased collagen, with other ECM proteins like fibronectin also contributing to the overgrowth. TGF-β1 may play a central role in this abnormal tissue buildup, as it promotes fibrosis. However, due to the rarity of IGF, there is limited information on effective long-term treatments, with frequent recurrence even after surgery.

Case Report

A 30-year-old female patient was referred to the department of oral and maxillofacial surgery with a painless swelling in the lingual region of the right mandible. It was determined that there was no systemic disease and pregnancy present in her medical history, also she did not use any medication. The patient stated that the swelling had been growing slowly since 2021. Intraoral examination(Figure 1) revealed a tight, pink colored, non-bleeding pedicled soft tissue in the mandibular lingual region, extending from the midline to the posterior of the ramus, at the occlusal level of the teeth. The lesion was removed (Figure2, 3) by excisional biopsy under local anesthesia and sent for histopathological examination. In histopathological examination, the relevant lesion (Figures 4a, 4b) appeared as densely collagenized connective tissue beneath keratinized, mature stratified squamous epithelium. It was noted that thick collagen fibers were irregularly structured and exhibited a perpendicular orientation towards the epithelium. Based on these evaluations, the lesion was diagnosed as fibromatosis. No recurrence was observed during the ten-month follow-up.

Discussion

Diseases such as chronic hyperplastic gingivitis, drug-induced gingival enlargement, sarcoidosis, Wegener's granulomatosis, leukemia, Chrohn's disease, von Recklinhausen's neurofibromatosis, primary amyloidosis and scurvy can be considered as the primary differential diagnosis of gingival enlargement(8).

GF can appear alone or as part of other conditions or syndromes, and it may be localized or widespread. The different forms of GF are classified as follows (9):

1. Isolated Hereditary Gingival Fibromatosis (HGF)
2. Isolated Idiopathic Gingival Fibromatosis (IGF)
3. GF with hypertrichosis (excess hair growth)
4. GF with hypertrichosis, mental retardation, and/or epilepsy
5. GF with mental retardation and/or epilepsy
6. GF associated with other syndromic diseases

Idiopathic gingival fibromatosis (IGF) is diagnosed in patients with no family history of gingival hyperplasia and no identifiable cause such as pregnancy, medications, or systemic disease. After excluding all known causes, IGF can be diagnosed. Recurrence is unpredictable but tends to occur more often in children and teens than in adults (3).

Histologically, gingival hyperplasia results from increased collagen bundle size and thickness in the connective tissue. The nodular look is due to a thickened hyperparakeratinized epithelium. The exact cellular and molecular causes are not well understood, but it is thought that human gingival fibroblast (HGF) keratinocytes play a role in promoting extracellular matrix buildup by fibroblasts (10). Recent studies suggest that increased cell growth and elevated production of ECM components like type I collagen and fibronectin may contribute to the increased gingival volume. Some researchers have noted that a higher number of fibroblasts is associated with a greater chance of recurrence (12).

Conclusion

The pathological accumulation of extracellular matrix (ECM) components, particularly type I collagen, appears to play a significant role in the development of all etiological types of gingival fibromatosis (GF). However, the precise molecular mechanisms underlying this process remain unidentified. To elucidate the specific molecular and mechanistic pathways that regulate the unique metabolism of gingival connective tissue, further investigation into drug interactions, innate and adaptive immune responses, cytokines and growth factors, as well as the roles of gingival epithelial and connective tissue cells, is essential. Such insights would enhance disease management and potentially facilitate the adoption of less invasive therapeutic approaches in routine dental practice, thereby reducing the need for surgical interventions(13).

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Figures

Figure 1: İntraoral appearance of the lesion

Figure 3: Excision of the lesion with operation

Figure 4: Image of lesion

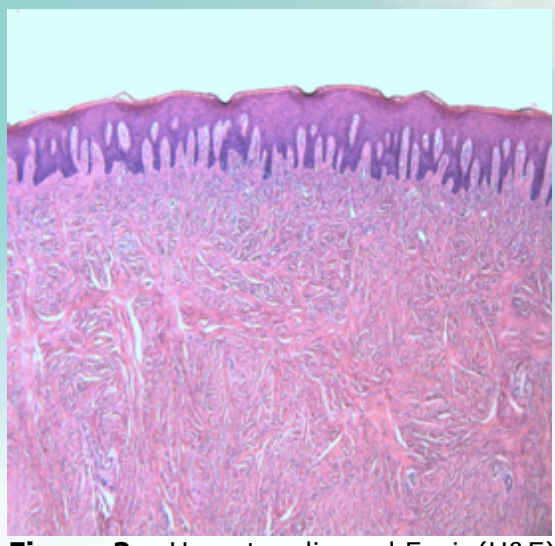

Figure 2a: Hematoxylin and Eosin(H&E) Stain,original magnification x40

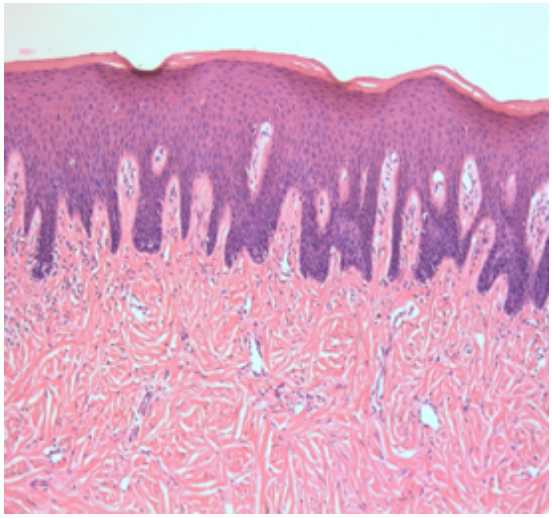

Figure 2b: Hematoxylin and Eosin(H&E) Stain,original magnification x100

[PP-068]

Imaging Characteristics of Mandibular Ewing Sarcoma: A Case Report

Introduction: Ewing sarcoma is a rare, aggressive primary malignant bone tumor predominantly affecting children and adolescents. It commonly originates in long bones, the pelvis, humerus, costal bones and spine, with mandibular involvement being exceedingly rare. Treatment often involves a combination of chemotherapy, surgery, and radiotherapy. This report aims to highlight the importance of considering Ewing sarcoma in differential diagnoses with imaging techniques, despite its rarity.

Case Report: A 29-year-old female presented with progressive extraoral swelling in the left mandible, developing over five months. The patient had no reported systemic conditions. Panoramic radiography demonstrated a multilocular lesion with mixed radiolucent and radiopaque features and poorly defined borders, extending from the mandibular body to the ramus. Due to the suspicion of malignancy, the patient was referred to the Otolaryngology Department. Subsequent imaging, including computed tomography revealed buccal and lingual bone perforation and magnetic resonance imaging showed a heterogeneous mass on T1-weighted images, raising suspicion of malignancy and prompting a tru-cut biopsy. Immunohistochemical analysis confirmed the diagnosis of Ewing sarcoma, with the primary tumor located in the mandibular ramus and metastasis restricted to bilateral cervical lymph nodes. The patient began monthly chemotherapy. Following five cycles, no further metastasis was detected, and a reduction in tumor size was observed.

Conclusion: Ewing sarcoma, while rare in the mandible, should be considered in the differential diagnosis, particularly in cases of aggressive bone lesions in the head and neck region. Early diagnosis through imaging techniques, differential diagnosis, and a multidisciplinary approach is critical for improving patient outcomes.

Keywords: Ewing sarcoma, mandible, computed tomography, magnetic resonance imaging, bone tumor, diagnostics

1. INTRODUCTION

Ewing sarcoma is the second most common metastatic primary malignant bone tumor, following osteosarcoma, predominantly affecting children and adolescents (1,2). It was first described by James Ewing in 1920 as a diffuse endothelioma of bone (3). This tumor originates from undifferentiated osseous mesenchymal cells and primarily affects adolescents and young adults, with the peak incidence occurring between the ages of 10 and 20 (4,5). Ewing sarcoma is more prevalent in males, with a male-to-female ratio of 1.5:1 (6).

Ewing sarcoma typically presents as a solid malignant tumor of bone, although it can occasionally arise in soft tissues. While long bones are the most frequently affected, it also commonly involve the pelvis, humerus, costal bones, scapula, and spine (7). Ewing sarcoma occurring in the head and neck region is exceedingly rare, accounting for less than 3% of all cases (8). When originating in the maxillofacial region, it most commonly affects the mandible and, more rarely, the maxilla. Ewing sarcomas localized in the head and neck region are reported to have a better prognosis compared to those in other anatomical locations (9). Key prognostic factors include tumor location, volume, and the presence of metastases (7). As the tumor enlarges, it can cause cortical destruction and invade the periosteum and surrounding soft tissues, increasing its potential for metastasis (10).

Radiologically, Ewing sarcoma of the mandible is characterized by periosteal reactions, producing a "sun-ray" or "onion-skin" appearance (4). Treatment of this highly aggressive tumor typically involves a combination of chemotherapy, surgery, and radiotherapy, depending on the case (11). Studies have reported survival rates reaching up to 80% (2,15).

2. CASE REPORT

A 29-year-old female patient presented to our clinic with a complaint of an extraoral swelling on the left side of her lower jaw, which had developed over five months (Figure 1). There was no history of trauma or pain associated with the swelling. The patient reported that she had previously received antibiotic treatment at another clinic, but the swelling had not subsided. Extraoral examination revealed mild facial asymmetry due to a diffuse swelling on the left side of the face. The skin over the swelling appeared normal and was consistent with the surrounding tissues. On palpation, no pain or increase in temperature was noted. The patient's medicalhistory revealed no systemic conditions. Panoramic imaging revealed a

poorly defined, osteolytic, mixed radiolucent and radiopaque, multilocular lesion extending from the body of the left mandible toward the ramus (Figure 2). Additionally, root resorption was noted in the canine, premolar, and molar teeth of the left mandible. The first and second molar teeth exhibited occlusal restorations, and the lamina dura borders were not distinctly traceable. The vitality tests for the involved teeth yielded positive results. Given the suspicion of malignancy, the patient was referred to the Department of Otolaryngology for further evaluation. The swelling was further evaluated using computed tomography and magnetic resonance imaging. Computed tomography scans revealed perforations in the buccal and lingual cortical walls of the left side of the mandible, along with resorption of the roots of the adjacent teeth (Figure 3). Magnetic resonance imaging, in axial (Figure 4a), sagittal (Figure 4b), and coronal sections (Figure 4c), demonstrated a 54x30 mm mass causing bone resorption, extending from the anterior portion of the left mandible to the ramus at the submandibular region level. Following the review of imaging findings, a biopsy was considered necessary. A tru-cut biopsy was performed, and immunohistochemistry (IHC) profiling was conducted for a definitive diagnosis. The CD99 marker, commonly seen in most cases of Ewing sarcoma, was found to be positive (Figure 5), and small round tumor cells were identified (Figure 6). The patient was diagnosed with Ewing sarcoma, with the primary site located in the mandible. PET imaging revealed metastasis limited to the bilateral cervical lymph nodes. The patient was started on neoadjuvant chemotherapy, administered once a month, consisting of vincristine sulfate, ifosfamide, etoposide, doxorubicin, and cyclophosphamide. After five cycles of chemotherapy, no additional metastasis was detected, and a reduction in tumor size was reported. The patient remains under chemotherapy treatment.

3. DISCUSSION

Ewing sarcoma is a malignant neoplasm that typically affects the long bones of the extremities. It is more commonly observed in males and predominantly affects adolescents and young adults (6). In this case report, the patient is a 29-year-old female. The most frequent sites of involvement are the pelvis and femur. Ewing sarcoma of the jaw bones is rare, accounting for less than 3% of cases, with the initial involvement in this case occurring in the mandible (8). The clinical symptoms of Ewing sarcoma, especially in the head and neck region, are non-specific. Depending on the tumor's localization, symptoms such as mass formation, induration, pain, swelling, venous dilation, and hyperemia may be observed (7). When the tumor arises in the mandible, tooth mobility, dental pain, otitis media, and paresthesia may also occur (12). The most common symptom, as seen in this case, is rapidly growing swelling.

Magnetic resonance imaging and computed tomography are considered the most effective imaging modalities for diagnosing malignancies such as Ewing sarcoma (13). Brazao-Silva et al. described periosteal reactions and sunburst-like osteolytic bone lesions as the most common radiological findings of Ewing sarcoma (7). In our case, CT images revealed sunburst periosteal reactions and cortical bone destruction in the body of the mandible, with lytic lesions extending from the body to the ramus. In magnetic resonance; T1-weighted images, the tumor typically appears hypointense relative to muscle and fat. T2-weighted sequences usually reveal a hyperintense signal due to tumor-associated edema and necrosis. Magnetic resonance is particularly useful in assessing soft tissue extension, bone marrow infiltration, and aggressive periosteal reactions, commonly associated with Ewing sarcoma.(14). In this case, T1 weighted images showed the heterogeneous mass adjacent to the mandibular body, along with periosteal reactions were observed, as well as enlarged submandibular lymph nodes on the same side.

The radiographic differential diagnosis of mandibular Ewing sarcoma includes osteogenic sarcoma, osteomyelitis, neuroblastoma, lymphosarcoma, histiocytosis X, rhabdomyosarcoma, and metastatic carcinoma (15). Osteosarcomas and other multilocular radiolucent lesions of the jaw are exceedingly rare and may exhibit osteolytic bone patterns at varying levels. Therefore, the radiological differentiation of these tumors can be challenging, and a definitive diagnosis requires histopathological examination (16). While periosteal reactions can be seen in all of these pathologies, the presence of intraoral soft tissue growth distinguishes Ewing sarcoma from eosinophilic granuloma and osteomyelitis. Additionally, it has been reported that Ewing sarcoma is often mistaken for dental or pericoronal infections, and even misdiagnosed as pericoronitis in some cases (17, 18).

Currently, Ewing sarcoma is treated using a multidisciplinary approach that includes chemotherapy, surgery, and radiotherapy (9). Treatment strategies are coordinated through collaboration among pediatric oncologists, medical oncologists, radiation oncologists, and orthopedic surgeons. In cases where Ewing sarcoma is localized in the head and neck region, treatment typically involves a combination of radical surgery, chemotherapy, and localized radiotherapy, which can improve long-term survival rates (19).

Although treatment outcomes for Ewing sarcoma have significantly improved in recent years, late-stage complications and secondary malignancies remain major risk factors. Therefore, long-term follow-up of Ewing sarcoma patients is crucial for the early detection of secondary malignancies, recurrences, relapses, musculoskeletal issues, and other potential complications.

4. CONCLUSION

Ewing sarcoma is a disease characterized by specific clinical, imaging, and histological features. This aggressive and rapidly growing metastatic malignant tumor can affect not only the pelvis and long bones but also the head and neck region. Ewing sarcoma, a rare malignancy that can involve facial bones at a young age, typically presents with rapidly enlarging swellings. This case highlights the clinical appearances and imaging findings of this rare tumor, particularly in the head and neck region, emphasizing the role of various imaging modalities in its diagnosis. Rapidly growing swellings in young patients should always be considered in the differential diagnosis of Ewing sarcoma. It is important to recognize that early diagnosis through a multidisciplinary approach is crucial for improving the prognosis of the disease.

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5. FIGURES

Figure 1: Extraoral swelling on the left side of the lower jaw.

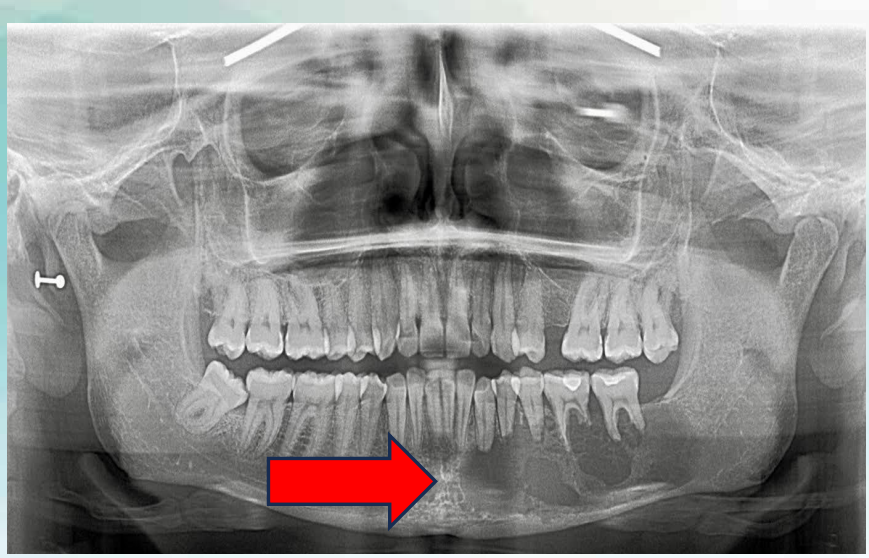

Figure 2: Panoramic imaging showed a poorly defined, osteolytic, mixed radiolucent and radiopaque multilocular lesion extending from the left mandibular body to the ramus.

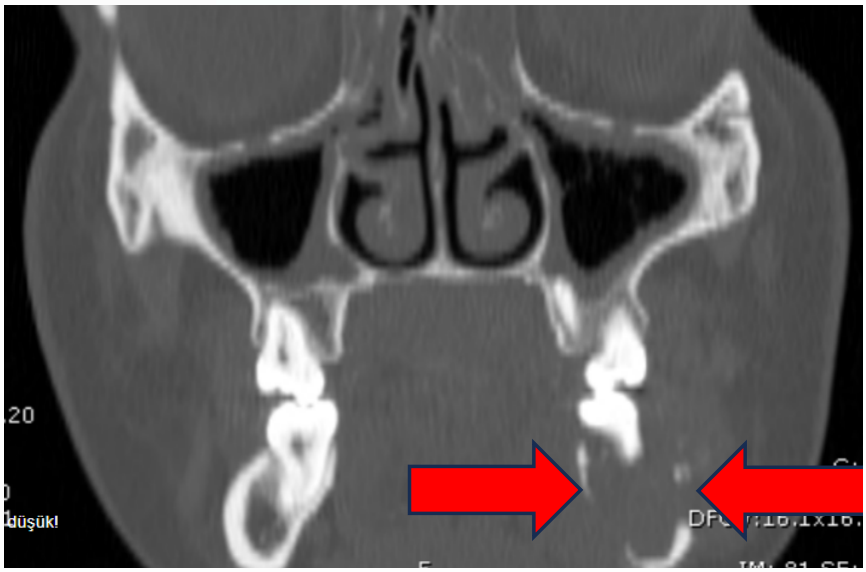

Figure 3: Perforations in the buccal and lingual cortical walls of the left side of the mandible in computed tomography.

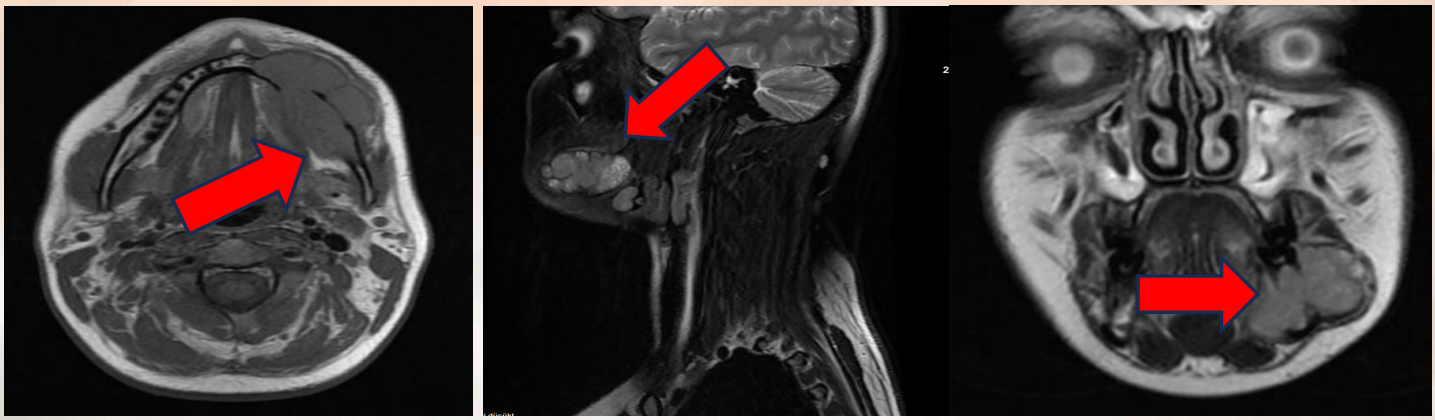

Figure 4a: Axial(4a), sagittal (4b) and coronal (4c) sections of the magnetic imaging resonance demonstrated a 54x30 mm mass.

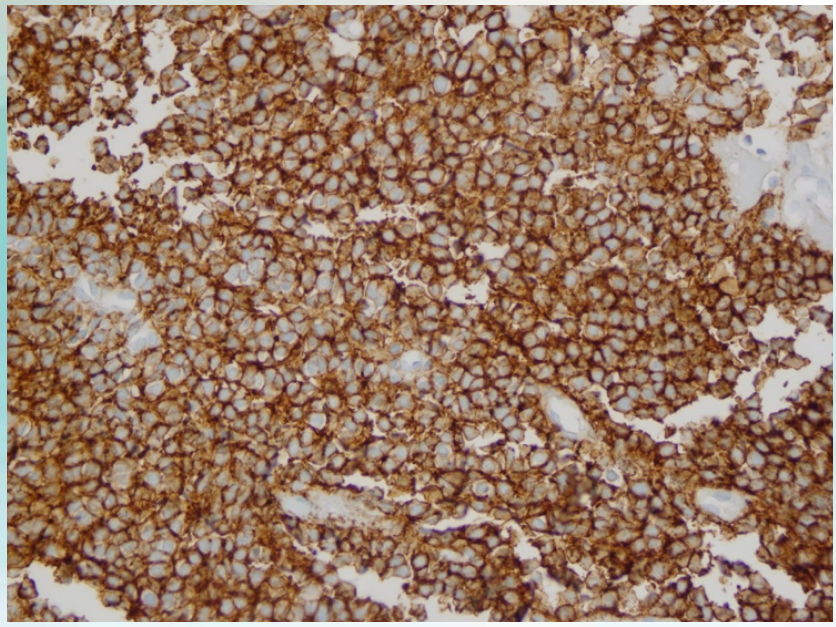

Figure 5: The CD99 marker was found positive.

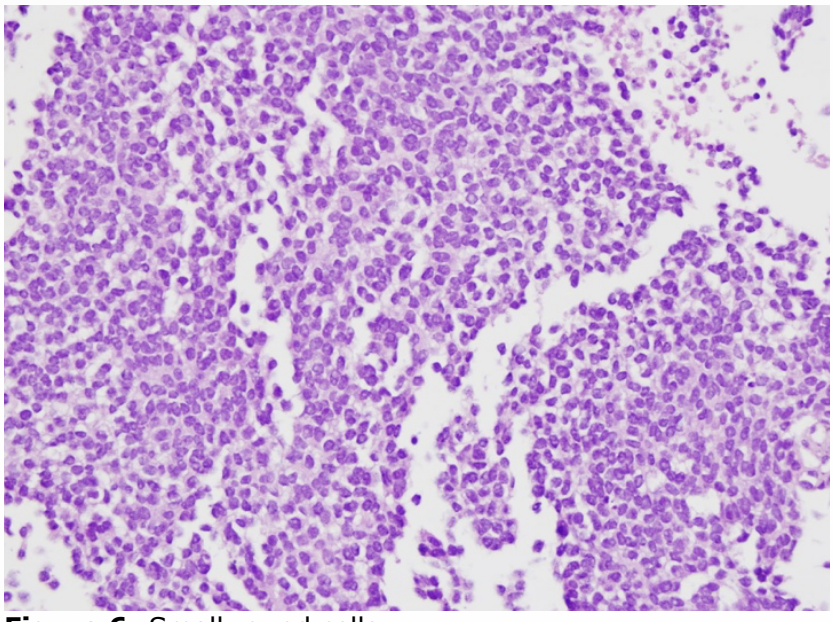

Figure 6: Small round cells.

[PP-125]

Actinomyces Osteomyelitis in the Maxilla: Case Report

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Abstract

Objectives: Actinomycosis osteomyelitis in the jaws, particularly in the maxilla, is rarer compared to the mandible. The pathogenesis and diagnostic criteria for actinomycosis osteomyelitis are quite challenging. Once diagnosed, it is recommended to remove the necrotic bone and initiate prolonged penicillin therapy.
Case Report: A 68-year-old male patient presented with complaints of expansion and purulent discharge in the right posterior maxilla. Based on intraoral and radiographic examinations, a biopsy was planned. The biopsy was sent for histopathological examination, which resulted in a diagnosis of actinomycosis osteomyelitis.
Conclusion: Actinomycosis osteomyelitis in the maxilla is quite rare but requires a serious treatment plan. Intensive antibiotic therapy and the removal of necrotic infected bone down to healthy tissue, along with the revitalization of the tissue, are necessary. Continuation of antibiotic therapy may be recommended until complete healing is achieved after surgery.

Key words: actinomycosis, osteomyelitis, maxilla

1. İntroduction

Actinomyces osteomyelitis of the jaws is a relatively rare infection characterized by abscesses and fistulas. The primary pathogen of cervicofacial actinomycosis is Actinomyces israelii. A chronic and slowly progressing condition typically develops following trauma, surgical intervention, or a preceding infection that disrupts the normal healthy mucosa. When the integrity of these mucosae is compromised, the disease may spread to adjacent tissues(1).

Actinomycosis is a polymicrobial infection that typically involves the presence of anaerobic streptococci, fusiform bacteria, and Gram-negative bacilli. There is a symbiotic formation within this flora (2). The relatively low invasiveness of actinomycosis is enhanced by this symbiotic relationship (3).
Bone involvement in actinomycosis is rare. When it occurs, osteomyelitis typically arises secondarily from the primary infection site. It progresses by extending from adjacent tissues and often develops into a pseudotumor by infiltrating through the tissues (4).

2. Case Report

A 68-year-old male patient was referred to our clinic due to expansion and the presence of an impacted tooth in the right posterior maxilla. Radiographs and intraoral examination revealed a fistulous tract in the palatal area and the presence of necrotic bone. Based on these findings, a biopsy was deemed necessary.

A flap was raised from the palatal region, and an incisional biopsy was performed on a sequestrum of bone that was separating from the underlying tissue. The tissue sample sent for histopathological examination was diagnosed as actinomycosis osteomyelitis. Antibiotic therapy was initiated for this case, and surgical intervention was planned.

3. Discussion

The natural course of *Actinomyces* infection begins with acute localized inflammation and progresses chronically, characterized by the formation of fistulas and abscesses (5). *Actinomyces* are Gram-positive, non-spore-forming anaerobic or microaerophilic bacteria. Due to their tendency to spread independently of tissue cavities or lymphatic drainage patterns, they can disseminate in any direction (6).

In the head and neck region, *Actinomyces* infections most commonly affect the mandible. Symptoms include swelling in soft tissues, abscess formation, and tumor-like swelling. In many cases, these infections are thought to originate from odontogenic sources via intraosseous pathways or from areas of recent surgical procedures (7).

Establishing an accurate diagnosis can be quite challenging. The diagnosis is typically based on the presence of the bacteria isolated in culture or histological preparations, or the presence of sulfur granules in tissue aspirates (8).

The standard initial treatment for *Actinomyces* infection is penicillin G; however, the organism is susceptible to various antibiotics. High-dose therapy may be required for several weeks or months. For patients allergic to penicillin, erythromycin and tetracycline are useful alternatives (9-10).When the disease is confined to soft tissues and does not present with osteomyelitis, the response to treatment is generally very good. However, in advanced cases, surgical intervention is indicated.

Surgical options include incision and drainage, excision and curettage of devitalized bone sequestra, and extensive local debridement (11). When limited to sequestraectomy alone in cases of osteomyelitis, the recurrence rate is high. However, reaching healthy bone and performing aggressive curettage along with appropriate antibiotic therapy has resulted in a 90% healing rate in cases (12).

4. Conclusion

Actinomycosis osteomyelitis in the maxilla is quite rare but requires a serious treatment plan. Intensive antibiotic therapy and the removal of necrotic infected bone down to healthy tissue, along with the revitalization of the tissue, are necessary. Continuation of antibiotic therapy may be recommended until complete healing is achieved after surgery.

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6. Figures

Figure1. Right maxilla posterior osteomyelitis region

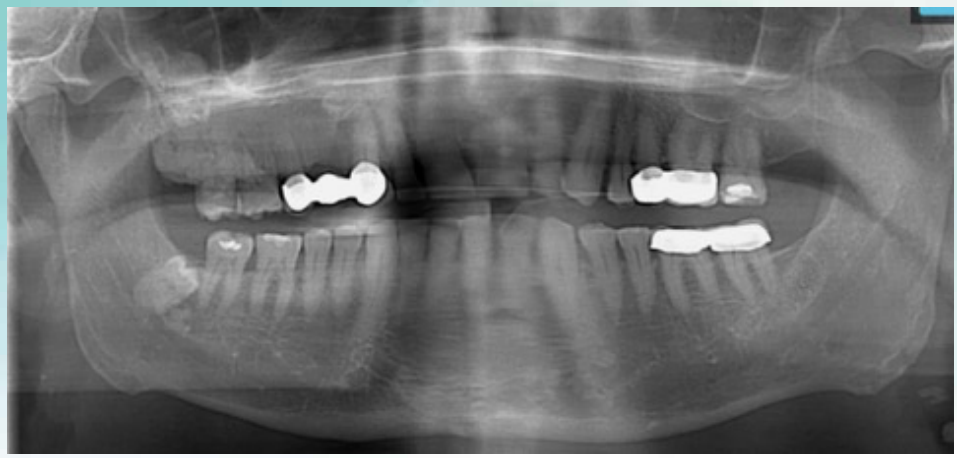

Figure 2. Panoramic X-ray of the patient

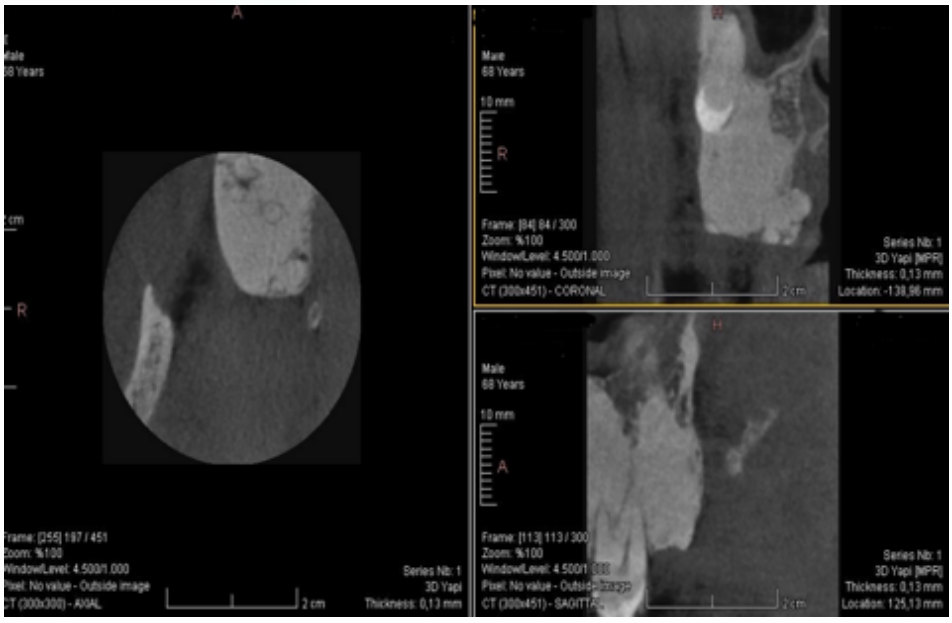

Figure 3. CBCT image of the patient

Figure 4. Biopsy site

Figure 5. Necrotic bone with incisional biopsy

[PP-126]

Maksiller Sinüste Aspergillus Enfeksiyonu

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Giriş

Son zamanlarda mantar kaynaklı burun ve paranazal enfeksiyonlardaki artış, hem tanısal araştırmaların gelişmesinden hem de mantar enfeksiyonlarını destekleyen durumların artmasından kaynaklanmaktadır[1]. Mantar enfeksiyonlarına zemin hazırlayan durumlar arasında diyabet, uzun süreli tedaviler (antibiyotikler ve kortizonlar), radyoterapi ve kemoterapi, immünsüpresif tedaviler ve immün yetmezlik hastalıkları yer alır[2]. Aspergillus tedavisinde sinüs fungal kitlelerinin cerrahi olarak çıkarılması ve Caldwell-Luc (CL) prosedürü veya endoskopik sinüs cerrahisi (ESS) ile yeterli sinüs drenajı ve havalanmasının sağlanması gerekmektedir[3].

Vaka Sunumu

1 aylık Vegabon kullanım öyküsü olan 52 yaş kadın hasta sinüs enfeksiyonu ve ağrı şikayeti ile kliniğimize başvurdu. Radyografik incelemede sol maksiller sinüs kavitesinin doluluğu ve merkezinde radyoopak lezyon izlendi. Hasta fizik tedavi bölümüne konsülte edildi. Konsültasyon sonucuna göre Vegabona 3 ay ara verdikten sonra lokal anestezi altında maxiller sinüs bölgesinde lezyon enükle edildi ve histopatolojik incelemeye gönderildi. Histopatolojik inceleme sonucunda kronik yoğun inflamatuar hücre infiltrasyonu ile aspergillus görünümünde fungal mikroorganizmalar olduğu öğrenilmiştir.

Sonuç

Veriler, kronik sinüziti olan tüm hastaların %10 ila %30'unun bir aspergillus enfeksiyonuna sahip olduğunu göstermektedir. Dental hastalığı olan veya dental tedavi görmüş hastalar yakından izlenmeli ve fungal top gelişme olasılığı hakkında bilgilendirilmelidir.

Anahtar Kelimeler: Aspergillus, kronik sinüzit, maksiller sinüs

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[PP-135]

Oral Piyojenik Granülom: Pediatrik Bir Olgu

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Giriş

Oral piyojenik granülom, ağız mukozasının geniş bir yelpazedeki nodüler büyümelerini tanımlayan inflamatuar bir hiperplazidir[1]. Piyojenik granülom vakaların %75'i dişetinde görülür ve tetikleyici faktörler arasında kötü oral hijyen, lokal irritanlar ve dişetindeki yabancı cisimler bulunur[2]. Oral piyojenik granülomlar çocuklardan yaşlılara kadar her yaş grubunda görülebilmekle birlikte, hormon düzeylerinin artması nedeniyle özellikle ikinci on yılda kadınlarda sıklıkla görülür[3].

Vaka

Kliniğimize dişetinde kanama ve şişlik şikayeti ile başvuran 12 yaşındaki kadın hastanın herhangi bir sistemik rahatsızlığı yoktu. Yapılan muayenede sol alt çene bukkal diş etinde ekzofitik, lobüler, eritamatöz ve kanamalı bir hiperplastik lezyon saptandı. Lezyonun sebebi olarak 75 numaralı mobil dişin ilgili bölgedeki lokal irritasyonu olabileceği düşünüldü. Lokal anestezi altında ilgili dişin çekildi ve lezyonun eksizyonu sağlandı. Lezyon histopatolojik inceleme için patoloji birimine gönderildi. Yapılan inceleme sonucunda piyojenik granülom olduğu tespit edildi.

Sonuç

Histopatolojik inceleme tanıyı doğrular ve benzer görünüme sahip çeşitli yumuşak doku lezyonlarını dışlar. Piyojenik granülomda cerrahi eksizyon tercih edilen tedavidir. Cerrahi eksizyondan sonra tekrarlama nadirdir.

Anahtar Kelimeler: Pediatrik hasta, piyojenik granülom, yumuşak doku lezyonları

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[PP-140]

Retromolar Bölgede SCC

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Giriş:

Oral scc tüm oral kanserlerin %90'ından fazlasını oluşturan bir malignitedir[1]. Oral bölgede en sık görüldüğü yerler dilin lateral yüzeyi ve ağız tabanıdır. Retromolar bölge, bukkal mukoza, gingiva, alveolar mukoza ve sert damak daha az sıklıkla etkilenmektedir [2]. 40 yaş ve üzeri erkeklerde daha fazla görülmektedir. Son yıllarda daha genç hastalarda da görüldüğü bildirilmiştir [3, 4]. Tütün ve alkol kullanımı oral bölgede görülen scc için en önemli iki faktördür [5]. Scc'nin erken fazında asemptomatik olduğu için teşhis edilemeyebilir. Lezyon ilerledikçe hafiften şiddetli ağrıya doğru artan klinik bulgular gösterebilir. Derin dokulara invazyonu sonucunda disfaji, ağrı ve parastezi görülebilmektedir [6]. Kemiğe invaze olduğunda radyografide sınırları belirsiz, litik lezyonlar şeklinde görülebilmektedir. Tedavi genellikle lezyonun eksizyonudur. Bazı durumlarda redyoterapi ve kemoterapide uygulanmaktadır [7].

Vaka sunumu:

Kliniğimize yönlendirilen 59 yaşındaki yabancı uyruklu, sistemik olarak DM bulunan erkek hastanın retromolar bölgesinde şüpheli bir lezyon tespit edildi. Hastadan alınan anamnezde sigara kullandığı öğrenildi. Retromolar bölgede yer alan çevresi yer yer lökoplazik ve eritemli olarak gözüken ülsere lezyon yüzeyden hafif kabarık olarak gözlemlendi. İnsizyonel biyopsi alındı. Histopatolojik inceleme sonucunda kas liflerine invaze, kalınlığı 4 mm'yi aşan squamöz hücreli karsinoma teşhisi konuldu. Hasta tedavisine ülkesinde devam ettiği için takip randevularına gelememektedir..

Sonuç:

SCC önemsiz görünümler de dahil olmak üzere çeşitli klinik formlarda ortaya çıkabilir ve bu durum tanıyı geciktirebilir ve sağkalımı tehlikeye atabilir. Bu nedenle erken tanı koymak, sağkalımı ve yaşam kalitesini iyileştirmek için intraoral lezyonları tanımak, dikkat etmek ve ihmal etmemek önemlidir.

Anahtar Kelimeler: oral kanser, retromolar bölge, SCC

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[PP-141]

Enucleation of Ameloblastoma after Marsupialization- Case Report

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Abstract

Ameloblastoma is a locally aggressive, benign tumor originating from odontogenic epithelial tissue. It constitutes 1% of tumors and cysts in the jaw bones and 10% of odontogenic tumors. It originates from Malessez-Serres residues formed during tooth formation, odontogenic cyst epithelium, especially the basal cells of the dentigerous cyst epithelium and the epithelium of the enamel organ.

In this case report, a radiolucent, well-circumscribed lesion was detected in the posterior region of the mandible in the clinical and radiological examination of a 13-year-old patient who applied to our clinic. A biopsy was taken from the relevant area and the result was a dentigerous cyst. Marsupialization was planned for the patient. The patient's cyst shrank after 10 months of follow-up. The biopsy result of the enucleated lesion was found to be ameloblastoma.

Ameloblastoma is a locally aggressive, benign tumor originating from odontogenic epithelial tissue. It constitutes 1% of tumors and cysts in the jaw bones and 10% of odontogenic tumors. It originates from Malessez-Serres residues formed during tooth formation, odontogenic cyst epithelium, especially the basal cells of the dentigerous cyst epithelium and the epithelium of the enamel organ. Genetic studies on ameloblastoma are numerous, and most studies have found mutations in genes in the mitogen-activated protein kinase pathway. BRAFV600E is the most frequently observed mutation. Ameloblastoma is a locally aggressive tumor that generally grows slowly in the clinic and can present with tooth loss, malocclusion, paresthesia and pain. Ameloblastoma is asymptomatic in approximately 35% of patients. The tumor is usually noticed by bone expansion or detected in routine radiological examinations. Briefly, ameloblastoma is characterized by a slowly developing, painless swelling. The lesion is usually in the mandible (90.9%) in the angulus and ramus regions; It is rarely seen in the maxilla. (1-3)
Generally, the most common form is solid/multicystic ameloblastoma (86%). Ameloblastoma is a tumor that has a high recurrence rate and tends to be aggressive compared to other types. (4) The tumor can be defined radiologically as unilocular, interradicular, multilocular (similar to a soap bubble-honeycomb appearance) radiolucency with well-defined borders. Unicystic ameloblastoma is a cystic lesion that has a lower recurrence rate (25%) and is less aggressive. Therefore, its prognosis is better than the multicystic type.

Case Report: A 13-year-old male patient without any systemic disease was admitted to our clinic. It was learned that a mass was detected in the lower jaw in the panoramic x-ray taken in another center. Extraoral examination revealed swelling in the left region and left asymmetry. As a result of intraoral and radiological examination, it was observed that tooth number 37 was not erupted. In the intraoral examination of the patient, expansion was detected in the left lower jaw corpus angulus region. In the panoramic image, a well-circumscribed, well-circumscribed, ranolucent lesion with a size of approximately 9cmx4cmx4cm was detected, containing teeth 37 and 38. (Figure 1,2).

Under local anesthesia, the mucoperiosteal flap was removed and the relevant area was reached, and after some bone reduction, a sample was taken from the lesion with an incisional biopsy. The tissue taken was diagnosed as a dentigerous cyst in histopathological examination. If enucleation is performed; It was thought that there would be a risk of fracture due to the size of the lesion and that paresthesia might occur as a result of inferior alveolar nerve damage. Marsupialization was planned for the patient.

The cyst pressure in the relevant area was reduced and a drain was placed through the opened bone cavity for washing. The drain was placed distal to tooth number 36 and was sewn to the relevant area with 3.0 silk suture to prevent it from falling out and preventing the cyst cavity from closing. (Figure 3) The drain was placed in the cyst cavity 3 times a day for 10 months. The cyst cavity was washed with physiological saline by the patient. The patient came for a check-up once a month. Over time, bone formation was

observed and the lesion shrank. (Figure 4,5) After the 8th month, Mandibular canal continuity was observed and the risk of fracture decreased significantly. At the 10th month, the patient was operated under general anesthesia and the impacted teeth 37 and 38 were extracted and the lesion was enucleated. After bleeding control, the tissue layers were sutured sequentially and closed primarily. In histopathological examination, it was learned that the lesion was ameloblastoma. Approximately 6 months after the surgery, OPG and CBCT were taken for control purposes. No symptoms were found in the postoperative controls.

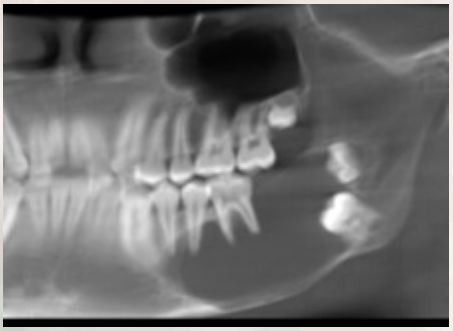
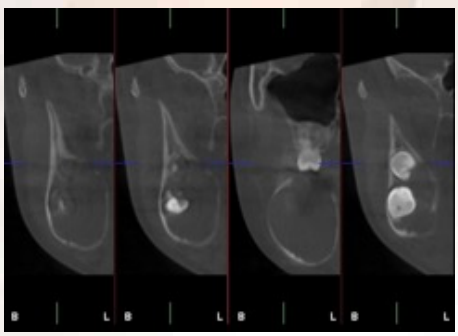


Figure 1: Preoperative OPG



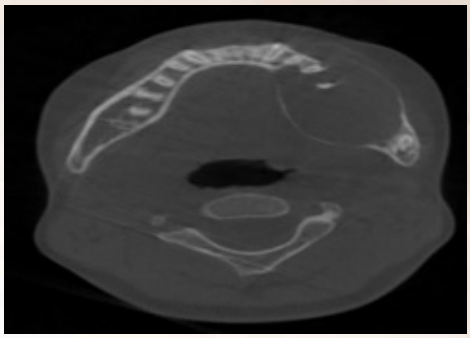
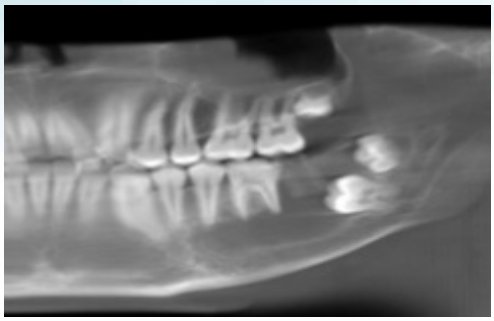
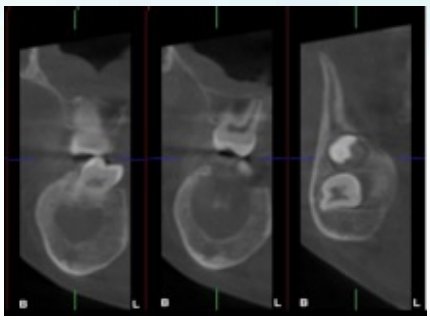


Figure 2: Preoperative CBCT image

Figure 3: View after the drain is placed





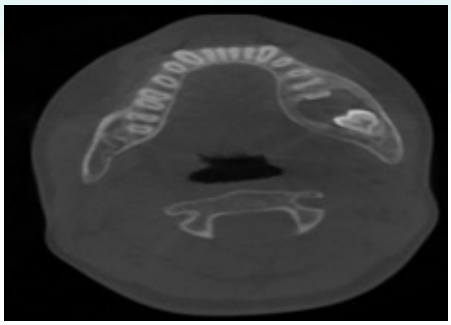
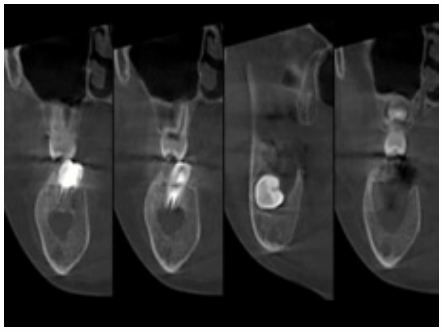


Figure 4: 6th month follow-up OPG and CBCT



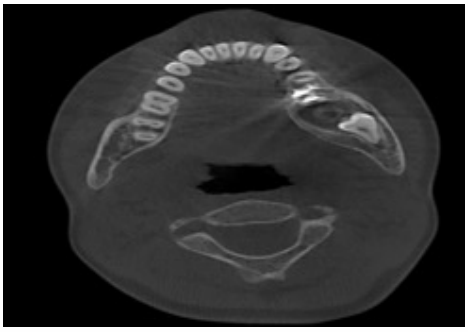


Figure 5: 8th month follow-up OPG and CBCT

During the operation of the lesion; Before enucleation (left) and after enucleation (right)

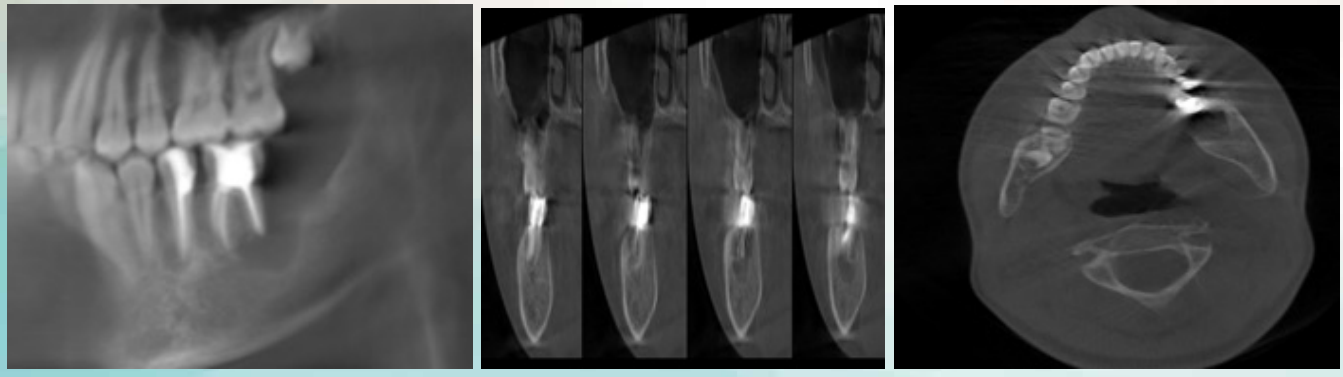
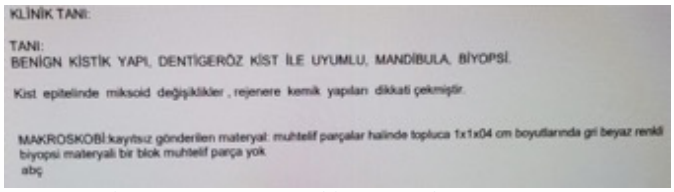


Figure 6: 1.5 years control OPG and CBCT

Conclusion

Starting the operation with a preliminary diagnosis of dentigerous cyst (Figure 8), finding no findings contrary to this preliminary diagnosis during the operation, and the final diagnosis being histopathologically cystic ameloblastoma (Figure 9), revealed the importance of postoperative follow-up in treatment planning. Since there is a possibility of recurrence of unycystic ameloblastoma, the patient's long-term It is useful to follow up. The treatment of AB is based on the type of tumor, high recurrence rate, location and size of the lesion. There is no single standard treatment for AB cases, which vary clinically and histologically, and each case is treated according to its own characteristics. The first treatment for cystic ameloblastomas in the mandible is curettage. If it is a large lesion or has reached the basis mandibularis, block excision or resection is preferred.

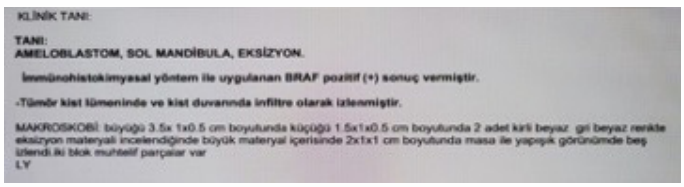

KLİNİK TANI:

TANI:
BENİGN KİSTİK YAPI, DENTİGERÖZ KİST İLE UYUMLU, MANDİBULA, BİYOPSİ.

Kist epitelinde miksoid değişiklikler , rejenere kemik yapıları dikkati çekmiştir.

MAKROSKOBİ:kayıtsız gönderilen materyal: muhtelif parçalar halinde topluca 1x1x04 cm boyutlarında gri beyaz renkli biyopsi materyali bir blok muhtelif parça yok
abç

Figure 8: Pretreatment biopsy result


KLİNİK TANI:

TANI:
AMELOBLASTOM, SOL MANDİBULA, EKSİZYON.

İmmünohistokimyasal yöntem ile uygulanan BRAF pozitif (+) sonuç vermiştir.

-Tümör kist lümeninde ve kist duvarında infiltre olarak izlenmiştir.

MAKROSKOBİ: büyüğü 3.5x 1x0.5 cm boyutunda küçüğü 1.5x1x0.5 cm boyutunda 2 adet kirli beyaz gri beyaz renkte eksizyon materyali incelendiğinde büyük materyal içerisinde 2x1x1 cm boyutunda masa ile yapışık görünümde beş izlendi.iki blok muhtelif parçalar var
LY

Figure 9: Biopsy result after enucleation

[PP-143]

Daimi ve Süt Kanin Diş ile İlişkili Kompound Odontoma

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Giriş

Odontomlar oral bölgede en sık görülen odontojenik tümörlerdir ve gerçek neoplazmlardan ziyade hamartom olarak kabul edilirler[1]. Odontoma terimi, artık tüm diş dokularını içeren lezyonları belirtmek için kullanılır ve iki türü içerir, kompleks ve kompound odontoma[2]. Odontomalar dental arkın herhangi bir yerinde bulunabilir. Maksilla anteriorda bulunan odontomaların çoğunluğu kompound, mandibulada posterior bölgelerde bulunan odontomaların büyük çoğunluğu ise kompleks odontomalardır[3]. Kompound odontoma, benign odontojenik tümördür ve genellikle genç erişkinlerde, daimi dişlenme dönemindeki diş eksikliğinin veya deplasmanının nedenini değerlendirmek için yapılan düzenli radyolojik muayene sırasında teşhis edilir[4].

Vaka Sunumu

Kliniğimize 16 yaşında erkek hasta rutin diş muayenesi için başvurdu. İntraoral muayenesinde deplase daimi kanin ve persiste süt kanin dişi dikkat çekmiştir. Panoramik radyografide sağ maksilla anterior bölgede radyoopak görünümde radyolusent sınırları olan diş benzeri yapıların bulunduğu görüldü. Ne hasta ne de ailesi bölgede herhangi bir ağrı veya şişlik öyküsünden bahsetmedi. Alınan CBCT sonucunda lezyonun 8*12*15 çaplarında olduğu görüldü. Lokal anestezi altında ilgili süt dişi çekildi ve radyoopak lezyon enükle edildi. Diş benzeri yapılar incelenmek üzere patoloji bölümüne gönderildi. Histopatolojik inceleme sonucu kompound odontoma teşhisi kondu.

Sonuç

Odontomaların olumsuz etkilerini önlemek için, bu lezyonların daha erken tespit edilebilmesi ve böylece enükleasyondan sonra gereken müdahalelerin en aza indirilebilmesi için çocuklarda ve genç erişkinlerde rutin diş muayenelerine daha fazla önem verilmesi gerekmektedir.

Anahtar Kelimeler: Hamartom, kompound odontoma, maksilla, radyoopak lezyon

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[PP-146]

Wharton Kanalında Tükrük Bezi Taşı

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Giriş: Sialolithiasis, majör tükürük bezlerinin kanallarında taş oluşumunu tarif eder.[1]. Kronik obstrüktif sialadenitin birincil nedenlerinden biri olarak kabul edilir[2]. Erkekler kadınlar iki kat fazla etkilenmektedir[3]. En sık submandibular bezde görülmektedir[1]. Bunun muhtemel nedeni wharton kanalının daha uzun olması, yukarı doğru tükürük akışı, mukus açısından zengin ve alkali tükürük üretimi ile ilişkilidir[4]. Submandibular taşların ortalama boyutu 7,3 mm'dir ancak 70 mm'ye kadar ölçülen dev siyalolitler tanımlanmıştır [5, 6]. Genel olarak, boyutu 15 mm'den büyük taşlar megalit olarak kabul edilir. [6].

Vaka Sunumu: 37 yaşında kadın hasta kliniğimize ağız tabanında şişlik şikayeti ile başvurdu. Bidigital muayene sırasında sublingual bölgede çevre yapılardan bağımsız sert kitle mevcut olduğu görüldü. Ağız mukozası normaldi ve eritem yoktu. CBCT'de 13*6*4,8 mm boyutlarında olduğu görüldü. Lokal anestezi altında cerrahi olarak çıkarıldı. Bölge tükürük akışını engellemeyecek şekilde 4-0 vicryl sütur ile dren yerleştirildi. 1 hafta sonra dren çıkartıldı ve Wharton kanalının fonksiyonunda bir değişiklik olmadığı ve tükürük akışının devam ettiği görüldü.

Sonuç: Tekrarlayan vakalarda submandibular bez eksizyonu ile daha agresif bir yaklaşım kaçınılmaz olabilir. Bu nedenle, hasta takipleri önemlidir.

Anahtar Kelimeler: Sialolithiasis, Submandibular bez, Wharton kanalı

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Maksiller Gömülü Dişler ile İlişkili Kompound Odontoma: İki Vaka Sunumu

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Giriş: Odontomalar yaygın görülen odontojenik tümörlerdendir. Hamartom olarak kabul edilmektedir[1]. Kompound ve kompleks olarak iki türe ayrılmaktadır [2]. Bu lezyonlar asemptomatiktir, rutin radyografilerde ve gecikmiş diş sürmesi ile fark edilirler [3, 4]. Genellikle yaşamın ikinci on yılında farkedilir. Kompound odontoma maksilla anterior bölgede(%61) daha fazla görülmektedir [5]. Tedavi pediatrik vakalarda daimi dişin erüpsiyonu için cerrahi olarak çıkarılmasıdır[6].

Vaka Sunumu 1: 13 yaş erkek hasta ortodonti bölümünden tarafımıza yönlendirildi. Kilinik muayene sonucunda persiste süt dişinin mevcut olduğu ve daimi kanin dişin sürmediği gözlemlendi. Sol maksilla anterior bölgede ekspansiyon olduğu görüldü. Radyografik incelemede horizontal konumda görülen 23 numaralı diş ve çevresinde multiple radyoopasiteler gözlendi. 23 numaralı dişin sürdürülememesinden dolayı etrafındaki radyoopak diş benzeri lezyonlar ile çekimine karar verildi. CBCT incelemesi sonucunda 20*12*15mm boyutlarında lezyon olduğu görüldü. Lokal anestezi altında lezyon enükle edildi ve 23 numaralı dişin çekimi gerçekleştirildi. Histopatolojik inceleme sonucunda kompound odontoma olduğu öğrenildi. 6 ay sonra ortodontik tedaviye başlandı.

Vaka Sunumu 2: 13 yaş kadın hasta pedodonti bölümü tarafından yönlendirildi. Klinik muayenede 11 numaralı dişin süremediği ve sağ maksilla anterior bölgede ekspansiyon olduğu görüldü. Radyografik inceleme sonucunda etrafında multiple radyoopasiteler gözlemlendi. BT incelemesi sonucunda 11 numaralı dişin bukkalinda lokalize olan 14*82*22mm boyutlarında lezyon olduğu görüldü. Lokal anestezi altında lezyon enükle edildi. Histopatolojik inceleme sonucunda kompound odontoma olduğu öğrenildi. Hasta uzak bir şehirden geldiği için 11 numaralı dişin sürmesi takip edilememektedir.

Sonuç: Genellikle maksilla anterior bölgesinde görülür ve çoğunlukla çocukları etkiler. Kompound odontomaların çoğu vakası daimi dişler ile beraber görülür ve dişlerin sürmesini engelleyebilir. Bu nedenle daimi dişlerin normal şekilde sürmesi ve maloklüzyonların önlenmesi amacıyla kompound odontomaların erken teşhis ve tedavisi önemlidir.

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[PP-152]

Gömülü Yirmi Yaş Dişi ve İnferior Alveolar Kanalla İlişkili Odontojenik Keratokist

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Giriş

Odontojenik keratokist (OKC), dental lamina kalıntılarından kaynaklandığı düşünülen gelişimsel kökenli bir kisttir[1]. 2005 yılında odontojenik tümör olarak sınıflandırılan ancak WHO tarafından 2017 yılında tümör olarak sınıflandırılmalarını destekleyecek yeterli kanıt bulunmadığı gerekçesiyle yeniden kist olarak sınıflandırılmıştır[2]. OKC'ler genellikle mandibular üçüncü molar bölgesi ve yükselen ramusta görülürler. Ancak hem maksilla hem de mandibulanın dişli segmentlerinde de görülebilir ve görünüm olarak tipik odontojenik kistleri taklit edebilir[3]. Bu kistleri çıkarmak için en iyi yöntem konusunda bir fikir birliği yoktur. Geniş bir tedavi yöntemi yelpazesiyle, klinisyenler seçimini tedavinin morbiditesine kıyasla etkinliğine göre yaparlar[4].

Vaka Sunumu

Kliniğimize alt çenede ağrı ve şişlik şikayetiyle başvuran 48 yaşındaki hastanın sistemik bir rahatsızlığı bulunmuyordu. Klinik olarak sol retromolar bölgede minimal ekspansiyon izlenmiştir ve enfeksiyon bulgusu saptanmamıştır. Panaromik radyografide sol mandibula posteriorda gömülü 3. molar diş ve inferior alveolar kanalla ilişkili radyoopak sınırlı uniloküler radyolüsent lezyon gözlemlendi. Lokal anestezi altında ilgili diş çekildi ve lezyonun enükleasyonu yapıldı. Histopatolojik inceleme amacıyla patolojiye gönderildi. İnceleme sonucu odontojenik keratokist tanısı koyuldu.

Sonuç

Özellikle konservatif cerrahiden sonra nispeten yüksek tekrarlama oranı, cerrahi olarak tedavi edilen OKC'li hastalarda periyodik radyografik izleme yapılmasını gerekli kılmaktadır. Tüm tedavi yöntemlerinin amacı nüksü ve cerrahi komplikasyonları azaltmaktır.

Anahtar Kelimeler: Gömülü diş, inferior alveolar kanal, odontojenik keratokist

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Kombine Kret Yetersizliğinde Otojen Onley Greft ile Tek Aşamalı İmplant Cerrahisi

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Giriş

Oral cerrahide otojen kemik, biyouyumluluğu, osteoindüksiyonu, osteokondüksiyonu ve osteojenik özellikleri nedeniyle kemik greftinde altın standart olarak kabul edilir[1, 2]. Standart prosedür, greft yerleştirilmesi sonrası implantların yerleştirilmesi için greftin maturasyonunun beklenmesini içeren iki aşamalı bir cerrahidir. Greftin boyutuna, alıcı bölgeye ve onley greft türüne bağlı olarak genellikle 3-6 aylık bir bekleme süresi belirtilir[3]. Bu protokolün dezavantajı, protez aşamasını geciktirmesi ve hastanın rehabilitasyon süresini artırmasıdır. Bu bağlamda, yazarlar implantların onley kemik greftleriyle aynı anda yerleştirilebileceğini öne sürmüştür[4, 5].

Vaka

Kliniğimize, 54 yaşında epilepsi hastalığı bulunan kadın hasta dişsizlik şikayeti ile başvurmuştur. Klinik ve radyografik inceleme sonucunda sol mandibular posterior bölgede vertikal ve horizontal kret yetersizliği tespit edilmiştir. İmplant tedavisi planlanan hastadan CBCT alınmıştır. CBCT değerlendirme sonrası otojen onley greft ile eş zamanlı implant cerrahisi planlanmıştır. Hastanın sol mandibular korpusundan blok greft alınmıştır. Aynı seansta 34,35 ve 36 numaralı bölgelere implantlar yerleştirilmiş ve alınan otojen greft implantların bukkal yüzeylerine mikro vidalar ile sabitlenmiştir. Takip seanslarında herhangi bir ağrı, enfeksiyon ve dehisens gözlemlenmemiştir. 6 ay sonra alınan kontrol radyografisinde implantların etrafında rezorpsiyon gözlemlenmemiştir. 6 ay sonra bölgedeki mikro vidalar çıkartılmış ve iyileşme başlıkları takılmıştır.

Sonuç

Otojen mandibular kemik greftlerinin, implant cerrahisinde kret genişliğini ve yüksekliğini artırmak için güvenilir bir yöntem olduğu bilinmektedir. Kret yetersizliği bulunan hastalarda onley greftlerle eş zamanlı implant yerleştirmenin, implantlarda daha iyi osseointegrasyon sağlayabileceği öne sürülmektedir.

Anahtar Kelimeler: Ogmentasyon, onley greft, tek aşamalı implant cerrahisi

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