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50th Anniversary of the Croatian Society of Oral Surgery of the Croatian Medical Association

Pre-Congress Hands-on Training Courses

H1 NEW BOTULINUM TOXIN – AZZALURE AND ALLUZIENCE

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Workshop on the newest registered botulinum toxin in Croatia, Azzalure and Alluzience in clinical practice, similarities and differences compared to previously registered botulinum toxin preparations. Workshop participants will be introduced to the indications, methods of preparation, dosage, application and possible complications.
Key words: Botulinum; Complications; Skin

H2 SOFT TISSUE MANAGMENT AROUND IMPLANTS

Luka Marković[1*]
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Today, the success of implant therapy is no longer defined exclusively by osseointegration implants, but also soft tissue. Management of soft tissue around the implant is of crucial importance for preserving peri-implant health, marginal stability bone and aesthetic outcome, especially in the anterior aesthetic segment. Surgical protocols in augmentation of soft tissues around implants include various techniques and types of soft tissue such as vascular grafts. gingival graft and the use of acellular xenogenes matrix as a replacement material. Through clinical cases and current guidelines from the literature the importance of an individualized therapy plan and a team approach to the goal is emphasized achieving a functional and aesthetically predictable result.
Key words: Dental implant; Osseointegration; Soft tissue

State of the art lecture

A1 PRINCIPLES AND CHALLENGES IN MODERN MAXILLOFACIAL SURGERY

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Modern maxillofacial surgery is characterised by rapid technological development and the integration of advanced techniques aimed at improving functional and aesthetic outcomes. The Department of Maxillofacial and Oral Surgery, Dubrava University Hospital, has undergone significant clinical and organizational expansion, resulting in the introduction of several key innovations in surgical practice. A major step forward has been the implementation of individualized temporomandibular joint endoprostheses, enabling precise reconstruction and improved long-term functional stability. Additionally, another introduced innovation is the minimally invasive endoscope-assisted transoral management of mandibular condylar fractures, which reduces morbidity and enhances postoperative recovery. The development of a comprehensive oncological multidisciplinary team has substantially elevated diagnostic accuracy, treatment quality, and survival outcomes. The importance of this collaborative model will be presented through clinical indicators and departmental performance data, reflecting the growing complexity and volume of oncological care. Parallel to these advancements, digital technologies such as virtual surgical planning, 3D printing, and patient-specific anatomical modeling have become integral parts of the treatment process. The Department is also preparing for further integration of robotic assistance and regenerative approaches in maxillofacial reconstruction. Despite clear progress, challenges remain, particularly in continuous education, cost-effectiveness of new technologies, and ethical considerations related to digital data and AI applications. The experience of the Department illustrates the trajectory of modern maxillofacial surgery toward individualized, technologically supported, and multidisciplinary patient care.
Key words: Maxillofacial surgery; Temporomandibular joint prosthesis; Fracture fixation; Computer-aided surgery

A2 THE FUTURE OF HEALTHCARE

Tomislav Mihaljević [1*]
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Dr. Tomislav Mihaljević delivered a keynote lecture on how large, integrated healthcare systems function and how global forces are reshaping the future of medicine. He described the organizational principles that enable high reliability, consistent quality, and

coordinated care across a complex network of hospitals, outpatient centers, and international sites. Dr. Mihaljević emphasized the increasing role of digital transformation—particularly artificial intelligence in clinical documentation, operational forecasting, and primary care—as essential to improving efficiency, patient access, and clinical decision support. He noted that the future of healthcare will rely on deeper system integration, multidisciplinary teamwork, and the capacity to deliver sophisticated services across regions and borders. His lecture offered participants a forward-looking view of how leading health systems navigate rapid change while staying anchored to their core mission of caring, discovery, and education.
Key words: Health care systems; Artificial intelligence; Telemedicine; Interdisciplinary communication

Invited lectures

I1 RECONSTRUCTION OF THE LOWER LIP USING AN INNERVATED MICROVASCULAR GRACILIS MUSCLE

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Introduction: Subtotal and total reconstruction of the lower lip represents a challenge for the plastic surgeon, as the lower lip primarily contributes to the function of oral sphincter continence. Fasciocutaneous free flaps and local flaps in elderly patients have been presented as optimal reconstructive options. Unfortunately, these methods do not provide functional contraction of the lower lip in larger defects involving the mucosa, muscle, and skin of the lip.Methods: In an attempt to achieve excellent functional and aesthetic results in a single procedure, the authors introduced the use of a functional (innervated) microvascular gracilis muscle. Dynamic sphincter function was obtained by coaptation between the motor branch of the gracilis muscle and the marginal branch of the facial nerve. A pedicled facial artery musculomucosal (FAMM) flap was used to replace the vermilion and inner mucosal surface of the lip, while a split-thickness skin graft from the scalp covered the external surface of the gracilis. The procedure was performed in twelve cases. Results: In all cases, the authors achieved an almost normal physiological movement of the lower lip, with symmetrical spontaneous and voluntarily controlled function. Skin grafts from the scalp and supraclavicular region showed excellent color and texture match with the surrounding facial skin. The aesthetic outcome was excellent considering the complexity of the reconstructed defect.Conclusions: The innervated functional gracilis muscle is capable of restoring normal oral sphincter function, enabling patients to speak, swallow, and maintain protective sensitivity normally. Skin grafts provide optimal aesthetic results, while mucosal reconstruction with the FAMM flap ensures both functional and aesthetic success.
Key words: Reconstruction; Lower lip; Facial artery

I2 ROBOTIC HEAD AND NECK SURGERY

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Introduction: Robotic surgery represents one of the most significant technological advances in modern medicine, and its application in head and neck surgery is becoming more frequent and significant. Its increasingly widespread application is changing the paradigm of surgical treatment in numerous surgical disciplines. In the field of head and neck surgery, which encompasses complex anatomy and requires exceptional precision, robotic surgery opens up new possibilities in both oncological and reconstructive treatment. Special attention will be paid to the Vinci robotic system, the most common platform for performing these procedures.
Materials and methods:The first cases of the application of robotic surgery at the Clinic for ENT and Head and Neck Surgery of the University Hospital Center Zagreb are presented.Results: The challenges faced by the application of robotic surgery in this region are analyzed, as well as the latest research and clinical studies comparing robotic and conventional techniques, as well as the prospects for further development of robotic platforms, including mini-robotic systems, systems with artificial intelligence, and navigation-guided technologies.Conclusions: The aim of this lecture is to provide a comprehensive overview of the current state, advantages and limitations of robotic surgery in the treatment of head and neck diseases, to stimulate discussion on the possibilities of implementing these technologies in everyday clinical practice, and to present the first experiences in the application of robotic surgery at the Clinic for ENT and Head and Neck Surgery.
Key words: Robotic surgery; Head; Neck

I3 HAS THE USE OF GROWTH FACTORS IMPROVED OUR CLINICAL BONE REGENERATIVE RESULTS?

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Bone reconstruction of the alveolar ridge over the last 35 years has increased in popularity especially since the introduction of the GBR concept. We frequently use autogenous bone to regenerate lost bone thus increasing patient morbidity due to a second harvesting site but the results are not always as predictable as we hope them to be. This is due to several reasons such as the resorption rate of the autogenous bone or its healing potential and quality. Growth factors, since their cloning in the late 1980s , have shown great promise and hope. Many have been cloned and put into clinical application, such as rhBMPs, rh-PDGF, EMD, rhFGF-2 and today hyaluronic acid. Also autologous blood products that contain various growth factors have gained in popularity as additions to bone regenerative procedures. However, after almost 25 years of clinical use have they lived to their full potential? Which are the still remaining issues/problems when we use them, such as the carrier and releasing kinetics? Optimization of dosages is also one more important issue. This lecture will provide state of the art information and clinical examples of where we are when using growth factors for bone regeneration.
Key words: Growth factors; Bone regeneration; Alveolar ridge

I4 REASSESSING INTERVENTION: WHY WE SHOULD PRIORITIZE TOOTH PRESERVATION OVER EARLY EXTRACTION AND IMPLANT PLACEMENT

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Dental implants have become an integral part of modern oral and maxillofacial surgical practice, offering a predictable solution for tooth replacement. However, the increasing tendency toward early extraction and implant placement has, in some cases, overshadowed a critical evaluation of whether natural teeth can and should be preserved. This lecture challenges the reflexive extraction mindset and presents compelling biological, functional, and long-term prognostic reasons why preserving the natural dentition is often the more prudent path—even from a surgical standpoint. The topic will examine the unique advantages of natural teeth, including the preservation of the periodontal ligament and associated proprioception, maintenance of alveolar bone through physiologic loading, and reduced risk of peri-implant diseases, which now affect a significant proportion of implants within a decade of placement. The topic will also cover clinical examples of teeth and lesions that are often prematurely diagnosed as nonrestorable, even though they may be successfully treated and preserved with a strategic, multidisciplinary approach. Furthermore, we will explore complications related to immediate or early implant placement, such as labial plate resorption, difficulty in achieving soft tissue esthetics, and the challenge of implant longevity in young patients. The discussion will integrate evidence from current literature, including long-term survival rates of compromised but treatable teeth, and the increased biological cost of re-treatment once implants fail. This paradigm shift not only aligns with minimally invasive principles but also serves the patient's long-term functional and esthetic interests.
Key words: Tooth; Dental implants; Periodontal ligament

I5 SURGICAL APPROACHES TO THE ROOF OF THE PARAPHARYNGEAL SPACE

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The parapharyngeal space (PPS) is an anatomically complex, inverted pyramid-shaped region extending from the skull base to the hyoid bone. It is bounded by the skull base superiorly, the hyoid bone inferiorly, the pharyngeal wall medially, and the mandibular ramus and parotid gland laterally. The PPS is divided by the stylopharyngeal fascia (Zuckerkandl and Testut's aponeurosis) into the prestyloid and poststyloid (retrostyloid) compartments. The prestyloid space contains fibrofatty tissue with embedded muscles, vessels, nerves, and glandular elements, while the poststyloid compartment houses critical neurovascular structures, including the internal carotid artery, internal jugular vein, sympathetic chain, and cranial nerves IX–XII.Given its complex anatomy and vital contents, the PPS can harbor primary malignant tumors originating from all three germ layers, as well as secondary lesions extending from adjacent anatomical regions. Surgical management of malignancies in this area represents one of the most demanding challenges in head and neck surgery, requiring meticulous planning and advanced techniques to balance oncologic clearance with preservation of function and aesthetics. Traditional surgical access to the upper PPS includes anterior (transoral-transmaxillary) and lateral (transmandibular) approaches. These methods aim to maximize exposure while minimizing morbidity and

damage to uninvolved structures. With the advent of endoscopic skull base surgery, minimally invasive transnasal and transmaxillary (transpterygoid) approaches have become viable alternatives for selected lesions of the upper PPS, leveraging the close anatomical relationship between the nasopharyngeal lateral wall and the PPS. However, due to limited anatomical landmarks and high regional complexity, endoscopic techniques in this region remain technically demanding and not yet standardized. This presentation outlines the key surgical anatomy, open and endoscopic approaches to the upper parapharyngeal space, and strategies for safe and functionally sound reconstruction following ablative surgery for malignant tumors of this challenging anatomical region.
Key words: Parapharyngeal space; Internal carotid artery; Skull base surgery

I6 PROGNOSTIC PREDICTORS OF SURVIVAL AND PATTERNS OF RECURRENCE IN HEAD AND NECK ADENOID CYSTIC CARCINOMA (HNADDCC): FORTY-YEARS OF EXPERIENCE

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Introduction: Adenoid cystic carcinoma (AdCC) is salivary gland tumour characterised by slow-growth, perineural infiltration, high rates of local recurrence and distant metastases. While 5-year survival rate are excellent, 10-, 15 and 20-year outcomes are poor mainly due to distant metastatic spread. The aim of this study was to determine predictors of prognosis in HNAdCC. To our knowledge this is one of the largest single-institution study in tertiary oncology center on HNAdCC with longest follow-up ever recorded.Materials and methods: This is a retrospective study of patients with HNAdCC who were primary surgically treated at Department of Maxillofacial Surgery, Dubrava University Hospital. Overall survival (OS) was calculated by using the Kaplan-Meier method. Cox regression was used in order to determine prognosticators of survival. Results: Between August 1984 and December 2020, a total of 80 patients were diagnosed with HNAdCC. Fifty-seven patients met inclusion criteria and received primary surgical treatment. Ages ranged from 13 to 88 years, with a mean of 53.2 years. At the time of diagnosis, 28 (49.1%) patients were known to have early (T1-T2) lesions, and 29 (50.9%) had advanced-stage (T3-T4) lesions. Twenty-one (36.8%) AdCCs originated from the major salivary glands and 36 (63.2%) from the minor salivary glands. Five-, 10-, 15-, and 20 and 25-year survival rates were, 68.4%, 64.8%, 55.3%, 40.1% and 30.9% respectively. Poor survival predictors included advanced T stage and minor salivary gland HNAdCC.Conclusions: In this large single-institution series, local and distant relapses were the most frequent pattern of recurrence. Metastatic disease (solely or in combination with local recurrence) was responsible for 73.7% and 45.2% of cancer-specific and all-cause deaths, respectively. Prognosticators of poor survival were advanced T stage and minor salivary gland HNAdCC.
Key words: Adenoid cystic carcinoma; Head neck; Recurrence; Survival; Prognosis

I7 „ORAL POTENTIALLY MALIGNANT DISORDERS - HEALTHCARE PROFESSIONALS TRAINING“ - PROJECT IMPLEMENTATION OVERVIEW

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Oral potentially malignant disorders (OPMD) present a heterogeneous group of conditions associated with an increased risk of developing oral cancer. Due to their low incidence in the general population, healthcare professionals in primary care are often insufficiently familiar with their clinical features, diagnostic procedures, treatment, and patient management.The aim of the project was to develop a training platform for healthcare professionals in order to raise awareness of OPMD within primary care settings across the European Union. A consortium composed of departments of oral medicine from six European universities (King's College London, CESPU Porto, Université de Bordeaux, Universidad de Santiago de Compostela, Università degli Studi di Milano, and the University of Zagreb) received funding through the Erasmus+ project "Oral Potentially Malignant Disorders – Healthcare Professionals Training" (2020-1-UK01-KA202-078917) to achieve this goal. During the two-year project period (31st December 2020 – 30th December 2022), the consortium developed the following educational resources for healthcare professionals: an interactive website, a textbook, an atlas of clinical photographs, and a review paper with guidelines for the management of OPMD in primary care, available in six European languages. Additionally, the project collaboration resulted in several scientific publications in leading international journals.The presentation will introduce congress participants to the implementation process and the outcomes of this collaborative project.
Key words: Oral potentially malignant disorders; Oral cancer; Primary care

I8 THE INDISPENSABLE ROLE OF DENTISTS IN THE MULTIDISCIPLINARY CARE OF PATIENTS WITH HEAD AND NECK TUMORS

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Cancers of the oral cavity, salivary glands, and oropharynx—areas that are readily visible during routine dental examinations—affect approximately 550,000 people globally each year, with around 265,000 deaths. Unfortunately, these cancers are still too often diagnosed at an advanced stage, although many of these cases could be detected earlier. Given their scope of work, dentists are in a unique position to recognize oral cancer at its earliest stage, when the lesion may be only a few millimeters in size and still asymptomatic. Early detection significantly increases five-year survival rates and allows for simpler treatment. Therefore, every dental examination should include a quick, one-minute oral cancer screening. In addition to early detection, dentists play a key role in preparing patients for oncologic therapy. Their involvement helps reduce the risk of acute complications such as oral mucositis, dry mouth, and taste disturbances, as well as chronic conditions like radiation caries, trismus, and osteoradionecrosis. These complications can be effectively prevented or minimized through timely dental intervention, as dentists possess the necessary expertise and skills. Dental care does not end before cancer treatment—it continues throughout therapy and rehabilitation. The inclusion of dentists in multidisciplinary oncology teams significantly contributes to reducing mortality and morbidity associated with head and neck cancers. These procedures and approaches will be further discussed during the lecture.
Key words: Oral cavity; Osteoradionecrosis; Oral cancer screening

I9 SENSITIVITY AND RESISTANCE OF BACTERIA TO ANTIBIOTICS AT THE DEPARTMENT OF MAXILLOFACIAL AND ORAL SURGERY, DUBRAVA UNIVERSITY HOSPITAL, IN 2024

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From January 1 to December 31, 2024, a total of 1,232 patient samples from the Department of Maxillofacial and Oral Surgery were processed at the Department of Clinical Microbiology and Hospital Infections. The most common were surveillance samples (skin, rectal, nasal, and throat swabs), followed by wound and abscess samples, and blood cultures. Pathogenic microorganisms were isolated from 432 samples, yielding a total of 500 isolates. No pathogenic microorganisms were found in the remaining samples. Among the isolates, the most prevalent were Enterobacteriaceae (*Enterobacter* spp., *Escherichia coli*, *Klebsiella pneumoniae*, *Citrobacter* spp., and *Serratia* spp.), followed by viridans streptococci (*Streptococcus anginosus*, *Streptococcus mitis/oralis*, *Streptococcus constellatus*), and anaerobic bacteria, among which the most common were anaerobic Gram-positive cocci (*Parvimonas micra*, *Peptostreptococcus* spp., *Finegoldia magna*), followed by *Prevotella* spp. and *Cutibacterium acnes*. Antimicrobial susceptibility testing of isolates was performed according to the standards of the European Committee on Antimicrobial Susceptibility Testing (EUCAST).Enterobacteriaceae frequently cause healthcare-associated infections. The rates of resistance to third-generation cephalosporins, ceftriaxone and ceftazidime, were 19% and 17%, respectively, while resistance to the carbapenems imipenem and meropenem was 1% and 3%. The highest resistance rates were observed among *K. pneumoniae* isolates. Of the 14 *K. pneumoniae* isolates identified, 6 produced extended-spectrum beta-lactamases (ESBL), and 3 of these also produced the oxacillin-hydrolyzing carbapenemase OXA-48. No resistance to ceftazidime–avibactam or colistin was recorded. Viridans streptococci and anaerobes are part of the normal oropharyngeal microbiota. However, they are often associated with the development of odontogenic infections. The resistance rates of viridans streptococci to penicillin and ampicillin were 18% and 15%, respectively, while resistance to clindamycin reached 32%. Susceptibility testing of anaerobic bacteria was performed on 12 isolates and showed good sensitivity to co-amoxiclav, piperacillin–tazobactam, and carbapenems. Resistance rates to metronidazole and clindamycin were 17% and 20%, respectively.
Key words: Antibiotics; Hospital infections; Penicilin

I10 TRIGEMINAL NEURALGIA-SUICIDE DISEASE

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Trigeminal Neuralgia is the worst pain in the world. It is often unbearable pain, which is why patients, unable to reduce the pain, resort to suicide. This is why this pain is also called suicidal pain. Trigeminal neuralgia is defined by the International Association for the Study of Pain (IASP) as a sudden, usually unilateral, severe, brief, stabbing,recurrent

episode of pain in the distribution of one or more branches of the trigeminal nerve. Based on clinical observations, compression of the nervus trigeminus near the origin of the brain stem, the so-called root entry zone, by blood vessels or tumors, may cause trigeminal neuralgia. Local pressure causes demyelination that leads to abnormal depolarization resulting in ectopic impulses. The description of the pain is fundamental; it must be sharp, shooting, lancinating, and „electric shock." The pain can be brought on by ordinary stimuli, such as eating, washing, shaving, cold, warmth, and draught. When the diagnosis of trigeminal neuralgia is made, the patient needs to undergo a magnetic resonance imaging (MRI) scan to exclude specifi c pathologies such as a tumor or multiple sclerosis, which could cause secondary trigeminal neuralgia. The medication of choice in pain management is carbamazepine. From an observational study, carbamazepine can reduce pain symptoms in about 70% of the cases. If the medical treatment is unsuccessful or has too many side eff ects, an invasive treatment can be carried out. This is currently five clinically reasonable possibilities surgical microvascular decompression (MVD), stereotactic radiation therapy, Gamma knife, percutaneous balloon microcompression, percutaneous glycerol rhizolysis, and percutaneous radiofrequency (RF) stimulation/neuromodulation treatment of the Gasserian ganglion.

Key words: Trigeminal neuralgia; Unilateral facial pain; Suicidal pain

I11 MULTIMODAL AND NEUROMODULATORY APPROACH TO THE TREATMENT OF REFRACTORY FACIAL PAIN

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Refractory facial pain represents a complex clinical entity, often resistant to standard pharmacological and surgical methods. Its heterogeneous etiology and overlap with odontogenic, otorhinolaryngological, neurological, and psychiatric disorders further complicate accurate diagnosis and effective treatment.We present a series of clinically relevant cases of patients treated within a multidisciplinary team (MDT) at Dubrava University Hospital. After exhaustive diagnostic evaluation and failure of conventional approaches, selected patients were included in advanced neuromodulation protocols. Motor cortex stimulation (MCS) was applied in patients with documented neuropathic facial pain, resulting in significant pain reduction and improved functionality. Deep brain stimulation (DBS) was used in patients with central pain syndromes, targeting thalamic and periaqueductal structures, while peripheral stimulation was applied in cases of clearly localized neuralgias.The majority of patients who underwent MCS and DBS reported ≥50% pain reduction on the VAS scale, decreased opioid use, and improved daily functioning. The best therapeutic response was observed in patients with a clearly defined neuropathic phenotype. Side effects were mild and transient. A multimodal approach incorporating advanced neuromodulatory techniques, particularly MCS and DBS, proved effective and safe in the treatment of refractory facial pain in carefully selected patients. Multidisciplinary evaluation enables precise diagnosis, patient stratification, and optimal therapy selection. Our results support broader clinical implementation and further development of such protocols as a standard of care for complex pain syndromes.

Key words: Refractory facial pain; Deep brain stimulation; Central pain syndromes

I12 BEYOND ALL-ON-4! ADVANCED TECHNIQUES AND THE USE OF SPECIAL IMPLANTS IN FULL-ARCH REHABILITATION OF THE EDENTULOUS MAXILLA

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The rehabilitation of the edentulous maxilla presents significant surgical and prosthetic challenges due to anatomical limitations, reduced bone volume, and unfavorable implant biomechanics. While the *All-on-4* concept has revolutionized fixed full-arch restoration in edentulous patients, it is not always suitable for all clinical situations. Advanced techniques and the use of specialized implant systems have expanded the range of therapeutic options beyond the standard *All-on-4* approach, allowing for individualized treatment even in cases of severe bone atrophy.This paper reviews and illustrates contemporary surgical and prosthetic strategies for full-arch rehabilitation of the maxilla, including the use of zygomatic, pterygoid, and transnasal implants, as well as hybrid concepts combining conventional and extra-maxillary anchorage. These advanced techniques enable fixed restorations without the need for extensive bone grafting procedures, reduce treatment time, and improve patient comfort and satisfaction. Precise digital planning, guided surgery, and immediate loading protocols further enhance the predictability and long-term success of such treatments. Clinical case examples demonstrate how tailored implant selection and innovative surgical approaches can overcome complex anatomical challenges. Functional and aesthetic outcomes confirm that, with a properly trained multidisciplinary team and careful case selection, full-arch rehabilitation "beyond All-on-4" can achieve excellent results even in highly resorbed maxillae. Advanced implant concepts represent a paradigm shift in managing complete maxillary edentulism, offering patients minimally invasive, predictable, and durable solutions that restore both function and quality of life.

Key words: All on 4; Maxilla; Guided surgery

I13 RECONSTRUCTING COMPLEX DEFECTS IN THE ALVEOLAR RIDGE USING ALLOGENIC BONE GRAFTS

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The reconstruction of defects in the alveolar ridge remains a significant challenge in both dental and maxillofacial surgery. Among the various materials available for bone grafting, allogenic bone has garnered considerable attention due to its widespread availability, versatility, and proven ability to promote bone regeneration. Derived from human sources, allogenic bone grafts offer a valuable alternative to autogenous bone, effectively minimizing donor site morbidity and reducing the complexity of the surgical procedure. This approach has shown substantial efficacy in even the most complex defects, restoring the structural integrity of the alveolar ridge, facilitating the successful placement of dental implants, and enhancing both functional and aesthetic outcomes. Particularly in cases involving large defects, individualized allogenic bone grafts—often referred to as „bone builders"—have proven to be an effective solution for reconstructing the alveolar ridge. These grafts reduce the need for extensive harvesting of donor bone, thereby decreasing surgical time and patient recovery. Additionally, advances in graft processing techniques have improved the osteoinductive and osteoconductive properties of allogenic bone, further optimizing its integration with host tissue. However, while allogenic bone grafts are a reliable solution for the reconstruction of avascular bone defects, they are not suitable for situations involving extensive loss of jaw continuity, where vascularized transplants remain essential. In such cases, the absence of a blood supply to the graft can impair healing and integration. Nonetheless, for defects where avascular bone grafting is feasible, allogenic bone substitutes offer a dependable and effective alternative, providing long-term stability and predictable outcomes in alveolar ridge reconstruction.

Key words: Allogenic bone grafts; Bone defects; Mandible

I14 DEVELOPMENT OF ORTHOGNATHIC SURGERY IN LJUBLJANA MAXILLOFACIAL UNIT

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Ljubljana Maxillofacial surgery University department has a long tradition of orthognathic surgery. First operations were carried out in 1948, operating by Kostečka principles. In the early sixties the first BSSO, under the mentorship of prof. Trauner from Graz was performed, the procedure remained the most popular orthognathic operation for many years. First patients did not have osteosynthesis during surgery, but just IMF for 6-8 weeks post operatively, because of discomfort and possible complication this kind of surgery was unpopular. After 1990, preoperative orthodontic preparation becomes obligatory and with fixed orthodontic appliances become a part of standard preoperative preparation. As surgery was accurately planned, atraumatic and repositioned bony fragments fixed with screws and plates, morbidity after surgery was diminished, hospital time shortened, and the procedures become predictable and safe. Besides the function, aesthetic results become more and more important. Introduction of bimaxillary procedures significantly improved esthetic and functional results and the number of operated cases increased. After 2000, we began to see more patients with sleep apnea syndrome and snoring disorders. The patients were first diagnosed in the pulmonology sleep laboratory and then examined by the surgical council for sleep disorders. We suggested various surgical solutions to the patients and in patients with pharyngeal space compression and breathing disorders, we suggested bimaxillary osteotomy with protrusion. Despite the good results, a smaller number of patients decide to undergo this procedure. Orthodontic preparation and dental repair are often a problem. After 2010, we began to insert orthodontic anchors in children with class III. We observe promising results in children with horizontal mandibular growth. In the last twenty years, as 3D diagnostics have become more accessible and safer, digital planning and printing of splints has become more popular.Among the orthognathic patients in Slovenia the skeletal Class III are predominant, what means the retrusion of upper and/or protrusion of lower jaw with their changes in size and form. In these patients we perform the three-dimensional facial scanning for facial soft tissues analysis. These data with traditional method for facial skeletal analysis – cephalometric analysis of side roentgenogram of head, enable the analysis of face as a unit pre and postoperatively. New technologies such as facial surface and intraoral scanning with digital support allow us new knowledge about facial characteristics and the results of treatment.

Key words: Orthognathic surgery; Skeletal Class III; Facial soft tissues

Oral presentations

O1 ORAL SQUAMOUS CELL CARCINOMA IN YOUNG PATIENTS WITHOUT CLASSICAL RISK FACTORS – THE ROLE OF AUTOIMMUNITY AND IMMUNOLOGICAL ENDOTYPES

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Introduction: Oral squamous cell carcinoma (OCSCC) is classically linked to chronic consumption of tobacco products and alcohol, while human papillomavirus (HPV) plays only a marginal role in this region. In recent decades, however, incidence has risen among patients younger than 45 years without such exposures. SEER data show an annual increase of tongue carcinoma by ~1.7% in women and 0.7% in men in this age group. Similar trends are observed in Europe and Asia. These "idiopathic" cases likely reflect hidden immunological mechanisms.Materials and methods:We retrospectively analyzed OCSCC patients younger than 50 years in a tertiary center, focusing on those without tobacco or alcohol exposure. Clinical observations were combined with literature data on autoimmunity and oral carcinogenesis, with Autoimmune Polyendocrine Syndrome Type 1 (APS-1) used as a human model. Results: A subset of young, risk-factor–negative patients developed OCSCC and showed a higher prevalence of autoimmune diseases (psoriasis, type 1 diabetes, multiple sclerosis, oral lichen planus, APS-1) and exposure to immunomodulatory therapies. In APS-1, defective Th17 signaling, neutralizing autoantibodies to type I interferons, and chronic mucocutaneous candidiasis synergistically generate a carcinogenic microenvironment, leading to early, aggressive OCSCC. Similar immune-driven pathways may operate in other autoimmune conditions, suggesting distinct immunological endotypes within the same malignancy. Conclusions: OCSCC in young patients without classical risk factors represents the same cancer entity but with diverse immune backgrounds. Autoimmunity and immune modulation, together with external triggers such as persistent infection or inflammation, may be crucial etiological factors. Systematic immunological and microbiological profiling could enable earlier recognition of at-risk individuals and inform targeted preventive

Key words: Oral squamous cell carcinoma; Young patients; Autoimmunity; Immunological endotypes

O2 HEAD AND NECK SQUAMOUS CELL CARCINOMAS – ASSOCIATION OF CLINICAL STAGE WITH EARLY OCCURRENCE OF REGIONAL LYMPH NODE METASTASES: A CASE SERIES STUDY

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Introduction: Non-melanotic malignant squamous cell carcinomas of the head and neck (NMSCCHN) are one of the most common diseases, with a rapid increase in their incidence. They are characterized by a high degree of aggressiveness in their spread and a high potential for metastasis to regional lymph nodes, which lead to a poor prognosis. The advanced stage of these cancers is uncommon with limited publications on the outcome of patients. The aim is to evaluate the relationship between the clinical stage of the tumor, its localization, the time of persistence based on the anamnestic data and the existence of metastases in the parotid and cervical lymph nodes, with a presentation of cases surgically treated at the Department of Maxillofacial Surgery, Clinical Hospital, Stip. Materials and methods: The evaluation was performed on 15 patients with advanced histopathologically proven squamous cell carcinoma of the head and neck (stage III and IV). All patients were operated on between January 2023 and March 2024. The tumors were divided into 4 different anatomical locations: face, ear, lower lip, buccal mucosa. Radical surgical excision of the tumor was performed in all patients. In cases where parotid metastases were confirmed, superficial parotidectomy was performed, and in those with neck metastases, selective neck dissection was performed. Results:Out of 15 patients, 4 were operated on for a large skin lesion on the face, 5 on the lower lip, 2 on the auricle and 4 on the buccal mucosa. In 2 patients, metastases were found in the parotid region, and in 6 patients there were metastases in Level IA and Level IB. Conclusions: Successful treatment of aggressive SCCHN includes early detection and diagnosis, radical surgical removal of the lesion, and radiotherapy as needed. Clinicians should consider multimodality therapy for better outcome in the treatment of advanced squamous cell carcinomas in the head and neck region.

Key words: Aggressive squamous cell carcinoma; Head and neck region; Clinical stage; Metastases

O3 LATERAL ORBITAL WALL RECONSTRUCTION AFTER BASAL CELL CARCINOMA PENETRATION—CASE REPORT

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Introduction: Advanced periorbital basal cell carcinomas may necessitate orbital exenteration and consequent vision loss, which significantly reduces patients' life quality. Orbital reconstruction is a demanding surgical procedure due to the complex orbital anatomy and vital structures located in the orbit. Materials and methods: In this case, we presented an 83-year-old patient with advanced basal cell carcinoma that had expanded into the orbit. An orbitotomy was performed to remove the tumor completely while preserving the eye function. Orbital reconstruction was performed by a standard surgical method using a titanium mesh modeled according to a natural phantom skull. Results: This orbital reconstruction maintained the eye function and achieved satisfactory facial esthetics. Conclusions: Reconstruction of orbital wall defects after tumor resection due to complex anatomy.

Key words: Basal cell carcinoma; Lateral orbital wall; Penetration; Reconstruction; Titanium mesh

O4 DYSGEUSIA CAUSED BY CHEMORADIOTHERAPY IN DAILY CLINICAL PRACTICE AMONG PATIENTS WITH HEAD AND NECK TUMORS

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Introduction: Dysgeusia, or altered taste, is a common acute complication of chemoradiotherapy. The purpose of this research is to analyse the current knowledge, attitudes, and clinical practice of clinicians regarding dysgeusia as a complication of chemoradiotherapy for head and neck tumors. The study aims to point out the lack of information among clinicians and differences in attitudes and practices in the care of oncology patients due to the lack of professional literature and guidelines. Materials and methods: Anonymous surveys were distributed to specialist doctors and residents who treat oncology patients. Respondents were approached in person if the survey was physical and by email if it was online. The research was authorized under the ethics protocol number 05-PA-2-5/25. Results: In this research, 89 respondents with a mean age of 39,4 +/- 11,3 years participated. 66,3% of respondents stated that they were educated about dysgeusia as a complication of chemoradiotherapy. With the statement that dysgeusia is the least harmful of all complications of chemoradiotherapy, 34,8% of respondents agree, and 9,0% completely agree. On the other hand, 48,3% agree and 34,8% completely agree that dysgeusia is often not given much importance as a side effect. In practice, 21.4% of respondents always inform oncology patients that changes in taste sensitivity may occur during therapy. Only 23,6% of respondents were not informed that effective therapy for dysgeusia does not exist; however, despite this, 37,1% of respondents claim to prescribe zinc supplementation. Only 11,2% of respondents think that verified and professional information about dysgeusia is easily available. Conclusions:The research shows that respondents lack certain knowledge about dysgeusia, opinions are divided, and in clinical practice, clinicians have different approaches to patients with head and neck tumors. Clinicians are willing to educate themselves on this topic, but further research is needed, and the availability of professional literature needs to be increased.

Key words: Dysgeusia; Head and neck tumors; Chemotherapy; Radiotherapy; Taste loss

O5 NEAR FATAL - MOST SEVERE ODONTOGENIC INFECTION

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Introduction: Necrotizing fasciitis of the head and neck most commonly develops as a complication of odontogenic infections but may also arise from other local infections. Clinically, it is characterized by rapid progression, markedly elevated inflammatory markers, and the risk of spread into deep fascial spaces and mediastinitis. Radiological imaging, primarily CT scans, is essential for assessing the extent of infection and surgical planning. The infection can spread several centimeters per hour, necessitating prompt diagnosis and urgent intervention. Materials and methods:This study includes all patients diagnosed with necrotizing fasciitis of the head and neck treated at the Clinic for Oral and Maxillofacial Surgery, often referred in an advanced stage of the disease. Diagnosis is based on clinical presentation and laboratory findings, while disease severity and prognosis are evaluated using various clinical indices. Treatment protocol involves aggressive antibiotic

therapy, multiple neck incisions with opening of all affected fascial spaces, tracheotomy, and when necessary, thoracotomy in cooperation with thoracic surgeons. Results:This study represents one of the largest European case series of necrotizing fasciitis of the head and neck. A significant increase in incidence was observed during the COVID-19 pandemic, potentially indicating immune system impairment. A high survival rate of approximately 90% underscores the importance of early disease recognition and aggressive surgical management. Clinical indices for assessing infection severity and predicting outcomes are presented, emphasizing the role of multidisciplinary treatment. Conclusions: Necrotizing fasciitis of the head and neck requires urgent and accurate clinical diagnosis alongside aggressive surgical and antibiotic therapy. Early intervention, recognition of infection spread rate, and collaboration with other specialists are key to successful outcomes and high survival rates.

Key words: Necrotizing fasciitis; Odontogenic infection complications; Clinical severity indices; COVID-19

O6 GUIDED BONE REGENERATION AND SOFT TISSUE AUGMENTATION IN THE ANTERIOR OF THE MANDIBULE AFTER ENUCLEARATION OF A CYST

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Introduction: Guided Bone Regeneration (GBR) was developed in the late 1980s, based on the principles of guided tissue regeneration. It quickly became the most popular and well-documented method of bone regeneration due to its versatility and predictability. Materials and methods: A female patient was referred by her dentist for implant-prosthetic restoration of tooth 41 following unsuccessful endodontic treatment. After tooth extraction and cyst enucleation, the extensive bone defect was regenerated using a xenogeneic bone substitute impregnated with hyaluronic acid (Cerabone Plus, Zossen, Germany) and a non-resorbable dPTFE membrane (Permamem, Botiss, Zossen, Germany), stabilized with a resorbable suture. Primary soft tissue closure was achieved at the end of the procedureAfter 6 months of healing, the non-resorbable membrane was removed. A biopsy was taken from the future implant site, followed by placement of an implant measuring 3.3 × 10 mm (BLT Straumann, Basel, Switzerland). Before flap closure, soft tissue was augmented with a xenogeneic collagen matrix (Mucoderm, Botiss, Zossen, Germany). After four months of healing, the implant was uncovered and a healing abutment was placed. Two weeks later, a provisional crown was fabricated to shape the individual emergence profile. Three months after implant exposure, a definitive screw-retained zirconia-ceramic crown was delivered on a Variobase abutment (Straumann, Basel, Switzerland). Results:Bone augmentation resulted in sufficient bone volume, enabling prosthetically guided implant placement with a surrounding bony wall >2 mm thick. Soft tissue augmentation provided peri-implant mucosa with a thickness >2 mm and a height >3 mm above the implant shoulder. Conclusions: The use of xenogeneic bone graft and xenogenic soft tissue substitutes enabled a predictable long-term and highly aesthetic outcome, with significantly reduced patient morbidity.

Key words: Guided Bone Regeneration; Bone augmentation; Xenogeneic bone substitute

O7 NEW MG. MEMBRANE IN BONE AUGMENTATION

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Introduction: Lateral and vertical bone defects are among the most challenging procedures in implantology. In order to achieve satisfactory and safe regeneration, various techniques have been described in the literature to increase bone volume. The NOVAMag membrane is produced from pure magnesium metal. Magnesium is a biodegradable metal that is resorbed by the human body without toxic residues. It is ideal for protecting bone defect voids during bone regeneration and maintaining the positioning of autologous bone and bone augmentation materials.Materials and methods: The patient in this case report was a 21-year-old female with an ankylosed first upper left incisor, soft tissue recession, and buccal bone dehiscence. In the first stage, partial tooth extraction was performed. After a 3-months period of healing, the horizontal bone defect was augmented using the magnesium membrane (NOVAMag membrane, botiss biomaterials GmbH, Zossen, Germany), Cerabone (botiss biomaterials GmbH, Zossen, Germany), and Maxgraft (botiss biomaterials GmbH, Zossen, Germany). Six months later, the implant (Straumann AG, Basel, Switzerland)was placed and immediately loaded with a temporary crown. Results:The implant achieved primary stability, and no inflammatory response was observed. Healing proceeded without complications, with adequate bone volume and well-integrated soft tissue at the augmented site. These outcomes are consistent with previous reports on the use of biodegradable magnesium membranes in combination with bovine xenografts and allografts, confirming their effectiveness in guided bone regeneration. Conclusions: The present case supports the use of magnesium membrane combined with bovine xenograft and allograft as a reliable method for managing complex bone defects. This approach not only allows predictable implant placement, but is also consistent with the growing evidence on the biocompatibility and resorbability of magnesium materials. Future studies are needed to evaluate long-term clinical performance, optimize procedural protocols, and further validate their application in the aesthetic zone.

Key words: Bone augmentation; Mg. Membrane; Xenograft; Allograft

O8 ORTHOGNATHIC SURGERY WITH CLEAR ALIGNER (INVISALIGN®)

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Introduction: Clear aligners are orthodontic appliances made of transparent, custom-fitted thermoplastic trays. Clear aligner orthodontics has developed over the last 20 years as a viable alternative to conventional multibracket fixed appliance. Some advantages of aligners include improved oral hygiene, shortened treatment time, comfort and discreet appearance. Orthognathic surgery procedures are usually completed using multibracket fixed appliance.
Materials and methods: Here we report a case of a female patient with class III malocclusion who underwent orthognathic surgery using clear aligners for pre- and postoperative orthodontic treatment.Results: Orthognathic surgery with clear aligners can cause several potential problems. Orthodontic appliances used in traditional orthognathic surgery prevent unforeseen tooth movement. However, in the initial weeks following surgery, the mandibular range of motion is extremely limited, making the placement of aligners difficult. Orthodontic buttons are attached to the dentition similar to braces and act like surgical hooks; however, more often than not, these buttons are not strong enough to hold 0.4 mm wire. It is also important to note that aligner placement postoperatively can cause a slight anterior open bite due to the thickness of the aligners; to minimize this open bite, aligners should only be worn for a maximum of 12 hours daily. Prior to surgery we placed the orthodontic buttons on the premolars and molars and used it for elastic guiding occlusion directly after the surgical procedure. We also used IMF screws for intra- and postoperative occlusion. We designed and printed extra „surgical aligners" for dental stabilization, but did not use them because of the fear of open bite. Conclusions: As the use of aligners in orthodontic treatment increases, the demand for solutions involving surgical correction of jaw discrepancies will also grow. To achieve optimal outcomes, specific techniques, planning approaches, and nuances unique to the use of clear aligners in combined treatments must be carefully considered.

Key words: Orthognathic surgery; Clear aligner; Occlusion

O9 STRUCTURE RHINOPLASTY

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Introduction: Rhinoplasty is one of the top five cosmetic surgical procedures performed annually in the United States. Rhinoplasty is precise surgery and therefore excellent results can be obtained with thorough knowledge of nasal anatomy and surgical relevance of altering these structures. Clear understanding must be reached between surgeon and patient regarding the perceived nasal deformities, surgical plan, and expected outcomes. materials and methods: Authors analyse most common deformities of nose. Prefered approach is external. This approach allows maximal exposure of the cartilaginous nasal structures, bony vault and septum. Authors will show that with structural grafting obtained from septal cartilage, rib and ear cartilage we can create stable nasal structure and correct significant nasal deformities such as significant tip deformity, crooked nose, secondary rhinoplasty and cleft lip rhinoplasty and also can be used in regular practice for primary rhinoplasty cases. Results:Before and after results will be presented to show our best practice. Conclusions: n our opinion structural rhinoplasty gives predictible and stabile result in reconstruction of midvault and tip surgery.

Key words: Open rhinoplasty; Structure rhinoplasty; Nose

010 VELOPHARYNGEAL INSUFFICIENCY IN CLEFT PALATE PATIENTS

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Introduction: Velopharyngeal insufficiency (VPI) is a complication of cleft palate repair, as well as a clinical sign of a submucous cleft palate. In VPI, the velopharyngeal port does not close completely, resulting in hypernasality, nasal air emission, secondary articulatory mistakes and reduced speech intelligibility, which can affect social integration, education and overall life quality. Early recognition and comprehensive treatment are essential for achieving the best possible functional outcome for every patient. Materials and methods: The evaluation of VP function is necessary before starting treatment, and should include a focused speech assessment, nasometry if needed, and at least one modality of VP visualization, either nasoendoscopy or videofluoroscopy, to define the pattern of closure and VPI severity. Treatment can then be tailored to address the underlying cause. Sometimes, speech therapy is enough for the milder cases or to correct compensatory articulation errors. Surgical treatment includes palate re-repair, pharyngeal flap surgery, sphincter pharyngoplasty, or posterior wall augmentation depending on closure pattern, palatal length and mobility. Results: Individualized treatment strategies after detailed evaluation can provide significant improvements in speech quality. One of the most common techniques is the Furlow double opposing Z plasty which repositions the muscle sling and lengthens the palate, improving both palatal length and mobility at the same time. The pharyngeal flap procedure is a reliable method for more severe cases with short and immobile palates. Postoperative complications are minor and rare when patients are carefully selected and prepared. Conclusions: In VPI evaluation and treatment, a multidisciplinary approach is mandatory. There are different underlying causes of VPI, therefore an accurate diagnosis is the basis of an individualized intervention and a good result in a high percentage of patients. VPI is an important condition in cleft care should be taken very seriously and approached.
Key words: Velopharyngeal insufficiency; Hypernasality; Cleft palate; Speech therapy; Furlow palatoplasty

011 CHALLENGES IN TEMOROMANDIBULAR JOINT ENDOPROTHESIS SURGERY

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Introduction: Temporomandibular joint (TMJ) endoprosthesis is considered the treatment of last resort for patients with irreversible joint loss, whether caused by degenerative disease, ankylosis, trauma, or extensive resections for tumors and other pathologies. Achieving good outcomes requires careful patient selection with a clear understanding of indications and contraindications, early recognition and effective management of potential complications, as well as realistic planning for the financial and logistic demands of treatment.materials and methods: We performed a narrative review of the literature using PubMed, Scopus, and Web of Science (2010–2025), including recent review papers, clinical series, and case reports. Manufacturer guidelines for approved devices were also reviewed, together with short but educative one year experience from UH Dubrava. Results: The main indications include end-stage degenerative joint disease (osteoarthritis, rheumatoid arthritis), ankylosis with functional limitation, post-traumatic loss, large segmental resections, and failure of previous reconstructive attempts. Absolute contraindications include active or suspected local infection, material hypersensitivity, severe parafunction such as bruxism, and inadequate bone stock for secure fixation. Relative contraindications include skeletal immaturity, uncontrolled systemic disease or immunosuppression, previous high-dose radiotherapy to the craniofacial region, planned radiotherapy (unless secure healing can be achieved prior to irradiation), lack of soft tissue, and poor compliance with rehabilitation protocols. Complications, in descending frequency, include infection, neuropathic or musculoskeletal pain, mechanical or aseptic loosening, heterotopic ossification or fibrous ankylosis, and—rarely—component fracture. Stock prostheses are typically chosen for standard bilateral degenerative disease or ankylosis because they are readily available and cost-effective. Custom-made devices are reserved for complex defects, particularly after oncologic resections, offering precise anatomical fit at the expense of higher cost and longer fabrication time.Conclusions: TMJ endoprosthesis therapy requires a multidisciplinary approach, careful patient selection, and structured management of complications. Individualized choice between stock and custom-made devices ensures the best functional outcomishod.
Key words: Temporomandibular joint; Endoprosthesis; Indications; Contraindications; Complications

012 SECONDARY CLEFT CHEILORHINOPLASTY

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Introduction: Despite the advances in primary cheilorhinoplasty, some patients will still present with residual deformities of the lip and nose with typical cleft stigmata. Secondary cheilorhinoplasty is an important part of comprehensive cleft care, with the goal of achieving symmetry and normal function. This requires careful planning and precise execution due to the complex combination of the congenital and iatrogenic deformity, scarry tissue and sometimes even lack of tissue.Materials and methods: The approach to secondary cheilorhinoplasty is markedly individualized: the variability of cleft anatomy as well as results of primary treatment, sometimes without access to detailed descriptions of previous procedures, stress the importance of preoperative analysis of the orofacial form, septal deviation, and nasal patency. Most often the techniques include open rhinoplasty with remodeling and augmentation of the nasal cartilages, septoplasty, nasal sill modification and total or partial lip revision. To achieve natural and long-lasting results, with elimination of obvious cleft stigmata and with unnoticeable scars it is essential to handle the soft tissues gently, to restore nasal structural support and optimize the anatomic relations in three dimensions. Postoperative analysis should include objective evaluation by the surgical team and take into account patient satisfaction. Results: Consistent and reliable improvements in nasal tip projection and symmetry, alar base position, lip volume and height and overall facial harmony can be achieved with adherence to the tried and tested techniques of cleft surgery and dedicated analysis and planning. Our patients have been reporting increased satisfaction with their appearance, greater self-esteem and better nasal patency.Conclusions: For a motivated cleft surgeon, secondary cheilorhinoplasty can be a very rewarding experience, albeit challenging. Continuous learning and rigorous examination of your own results with long-term follow-up are crucial to achieve acceptable results.
Key words: Cleft lip; Cleft cheilorhinoplasty; Rhinoplasty; Cheiloplasty

013 AURICULAR KELOID FORMATION SECONDARY TO AN INFECTED TYPE I BRANCHIAL CLEFT CYST: EXCISION AND RECONSTRUCTION

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Introduction: Patient suffered from formation of sizeable keloid scar around left auricula and parotid region due to chronic discharging infection of congenital, cleft , sinus , over the past several years. Materials and methods: Treatment surgical , excision and meticulous dissection of the keloid scar snd excision of the congenital sinus, cyst. Recostruction with local advancement skin flaps. Results: Postoperatively Good results,. Congenital sinus cyst excised and obliterated completely with no recurrent infection or discharge. Cosmetically ,very good result, patient is very happy. Anatomically in perfect order with all auricula features preserved.Conclusions: Surgical treatment + excision of cleft cyst was the method of choice in this case. Patient has been monitored and followed up regularly and still getting local Kenalog injections
Key words: Keloid; Surgery; Follow up

014 30 YEARS OF SURGICAL PROSTHETICS AT UNIVERSITY HOSPITAL DUBRAVA

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Introduction: For three decades, the Surgical Prosthetics and 3D Technology Clinic has been operating as part of the Clinic for Maxillofacial Surgery at Clinical Hospital Dubrava. The clinic is unique in Croatia. Through continuous investment, the clinic is equipped with a 3D laboratory, enabling us to provide highly personalised care through advanced technology and innovative treatment strategies. Digital technology, including 3D printing, allows for precise prosthetic rehabilitation, customised to each patient.
Materials and methods: The state-of-the-art 3D laboratory uses advanced 3D printers, and the clinic is equipped with a high-resolution intraoral scanner to create accurate digital impressions, which facilitates design and enables the production of high-quality prosthetic work. A team of skilled dental technicians, specialising in maxillofacial prosthetics, ensures the delivery of high-quality solutions tailored to individual patient needs. Results: A collaborative, multidisciplinary approach is central to our practice, involving close cooperation between surgeons and prosthodontists to ensure the development of comprehensive and integrated treatment plans. By integrating their expertise, the team effectively addresses complex reconstructions, striving for optimal functional and aesthetic outcomes. Conclusions:The core mission of our clinic and the Surgical Prosthetics Clinic is to enhance the quality of life for our patients by restoring essential functions and adequate resocialisation. We provide comprehensive therapy following oncological procedures, aimed at minimising complications and improving treatment outcomes. This

holistic approach considers the physical and emotional well-being of our patients in order to provide them with the best possible care. Our clinic remains committed to the highest standards of care through continuous professional development and monitoring of the latest advancements. By pushing the boundaries of surgical prosthetics and 3D technology, the clinic aims to further advance patient care and improve outcomes.
Key words: 3D technology ; Maxillofacial prosthetics; Digital dentistry

015 ORAL SURGERY PROCEDURES IN SEVOFLURANE IHALATION ANESTHESIA AND PROCEDURAL SEDATION IN UNIVERSITY HOSPITAL DUBRAVA

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Introduction: Oral surgery procedures (OSP) under sevoflurane inhalation anesthesia (SIA) and procedural sedation (PS) have been performed in the pediatric population and in special needs patients at the University Hospital Dubrava (UHD) for over two decades. The aim of this retrospective study is to analyze the frequency and type of oral surgery procedures under SI and/or PS from 2020 to 2025. Materials and methods:Data on treated patients were collected from the medical records of the UHD.Results: A total of 863 OSP had been performed in SIA and PS from 2020 to 2025, of which 325 patients were female (37.7%) and 538 were male (62.3%). The age of the patients ranged from 0 to 90 years, with a median of 11 years. The most frequent patients with a diagnosis were the ones with mental retardation (25%) and autism (21%). The most common dental diagnoses were deep caries (44%), residual tooth root (27%) and submucosal vestibular abscess (9%). Perioperative complications were recorded in 13 patients (1.5%). The most commonly performed OSP were extraction of up to three teeth (61%), extraction of 4–6 teeth (22%) and extraction of 7–10 teeth (7%). SIA was most commonly used (62%), followed by SIA + PS (24%), while PS was used in 14% of patients. Complications emerging from anesthesia were recorded in one patient (0.1%). Conclusions: The results of this research justify the performance of OSP in SIA and PS among the pediatric population and individuals with special needs. The special significance of this type of anesthesia is that it enables quick treatment of emergency and elective procedures, without endotracheal intubation, in circumstances when patient cooperation is difficult or not possible. The application of SIA or PS represents a clinically and ethically acceptable method that enables greater feasibility of OSP in sensitive groups of patients.
Key words: Oral surgery; Sevoflurane inhalation anesthesia; Procedural sedation; Special-needs patients; Dental care

Oral presentations Hospital Dentistry

O1 DECOMPRESSION AS THE METHOD OF CHOICE IN THE TREATMENT OF LARGE JAW CYSTS IN CHILDREN

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Introduction: Decompression aims to decrease the volume of large jaw cyst in children, in order to prevent surgery-related fractures and to preserve the surrounding important anatomical structures such as the inferior alveolar nerve. It could lead to a complete regression. If not, secondary enucleation can be performed in better conditions: a reduced volume to remove, a thicker epithelium to detach, a lower risk to damage neighboring anatomic structures and a lower recurrence rate. Long-term follow-up however remains necessary. For the decompression protocol the patient must be motivated to perform a rigorous oral hygiene and a specific flushing one or twice a day for several months. Materials and methods: An initial orthopantomogram showed a radiolucent image. CBCT scans examination gave a proper evaluation of the real volume of the lesion. Biopsy was mandatory before any treatment decision, biopsy material was conveniently harvested from the resected tissue when performing the decompression using a simple draining rubber tube sutured to the mucosa. Every 2 months, the evolution of the lesion was monitored through radiological and clinical examinations and the position of the drain was checked. Results: As a result of the decrease of the intracystic pressure, new bone formation along the periphery of the cystic wall was noticed on the radiological follow-up examinations: decompression allows the lesion to be gradually replaced by bone, putting distance between the lesion and noble anatomical structures. After a decompression protocol, when the volume has decreased sufficiently for enucleation, second stage surgery was performed. Conclusions: Decompression protocol should be reserved for patients sufficiently motivated and skilled enough to perform daily flushing for months and to attend control consultations. Decompression represents a minimally invasive and preservative treatment of large jaw cysts.
Key words: Jaw; Cyst; Surgical treatment; Decompression

O2 CENTRAL GIANT CELL GRANULOMA OF THE MAXILLA – CASE REPORT

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Introduction: Central giant cell granuloma of the jaw (CGCG) is a rare intraosseous, locally invasive osteolytic lesion characterized by proliferation of multinucleated giant cells and fibrous tissue. Clinically, it occurs in aggressive and non-aggressive forms. Aggressive lesions often show rapid growth, destruction of surrounding bone, tooth displacement and resorption, and have a significantly higher tendency to relapse. Non-aggressive forms grow more slowly, but still require timely treatment. Materials and methods: We present the case of an 8-year-old patient with an expansive lesion in the maxilla. Detailed clinical and radiological examinations (panoramic image and CBCT) were performed, along with histopathological analysis of the biopsy. In addition, a review of the relevant literature was performed with the aim of comparing therapeutic approaches and their outcomes. Radiological findings indicated an expansive osteolytic change with cortical thinning and displacement of adjacent teeth. Histologically, the proliferation of multinuclear giant cells in the fibrous stroma was confirmed, thus establishing the diagnosis of CGGC. Results:The lesion was removed by surgical enucleation and curettage. The postoperative course was uneventful, with recovery of function and aesthetics. Follow-up to date has shown no signs of recurrence. A review of the literature confirms surgical treatment as the gold standard, while pharmacological adjuvants (corticosteroids, calcitonin, interferon-α, bisphosphonates) are increasingly being considered to reduce the size of the lesion before surgery or prevent recurrence. Conclusions: CGGC is a significant lesion due to its possible aggressive behavior, destructiveness, and aesthetic and functional consequences. Accurate differential diagnosis, especially from brown tumor in hyperparathyroidism, is essential for proper treatment. The best results are obtained by a combination of surgical treatment and individualized selection of adjuvant methods, with long-term clinical and radiological follow-up of the patient.
Key words: Central giant cell granuloma; Maxilla; Diagnosis; Surgical treatment

O3 DENTAL TREATMENT OF MEDICALLY COMPROMISED PATIENTS

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Introduction: Oncology patients who have undergone radiotherapy to the head and neck are one of the most demanding patient groups in dental practice. Due to severe xerostomia and reduced bone healing potential and impaired structure of hard dental tissues, these patients show a high tendency to develop dental caries and radio-induced osteonecrosis.Materials and methods: This case report will describe the endodontic therapeutic procedure of a patient with very poor dental status who has a history of osteoradionecrosis, which avoids tooth extraction that would potentially lead to new osteonecrosis. Due to extensive carious destruction, it was necessary to remove the crowns of all teeth and the remaining roots were sealed with composite fillings to prevent leakage and reinfection of the intracanal filling. Results: After endodontic treatment, all symptoms resolved. Conclusions: In healthy patients, the clinical picture of extensive carious destruction would require extraction of most teeth in the upper and lower jaws, which is not possible in this patient. Therefore, the only therapeutic solution is endodontic treatment of all teeth to prevent extraction.
Key words: Endodontic treatment; Oncology patients; Osteonecrosis

O4 ORAL IMMUNE RELATED ADVERSE EVENTS – CHALLENGES IN DAILY PRACTICE

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Introduction: Immunotherapy has become an important therapeutic option in the treatment of various malignant diseases. Although they significantly improve survival, immune checkpoint inhibitors (ICI) are associated with immune-related adverse events (irAEs). Among these, oral lesions, although less common than dermatological or gastrointestinal ones, can significantly impair quality of life and interfere with oncological treatment. The most common oral lesions caused by immunotherapy include mucosal erosions and ulcerations, lichen planus-like lesions, aphthous ulcerations, candidiasis, xerostomia, and dysgeusia. The clinical presentation is often nonspecific and overlaps with the effects of chemotherapy or radiotherapy, which makes diagnosis difficult. Mild changes can be controlled with local measures such as topical corticosteroids, anesthetics, and antifungal drugs. More severe cases require systemic immunosuppressive therapy and, in certain circumstances, temporary discontinuation of immunotherapy. The lecture will present the most common oral lesions caused by immunotherapy and their treatment.Conclusions: Oral lesions associated with immunotherapy represent a significant clinical challenge due to their diverse presentation and potential impact on the course of oncological treatment. Timely recognition and adequate treatment improve patient's quality of life and the continuity of oncological therapy. Patient education on oral hygiene and the importance of early symptom reporting is essential for reducing morbidity and preventing lesion progression. A multidisciplinary approach, involving oncologists, dentists, and other specialists, has proven to be most effective in timely patient care.
Key words: Immunotherapy; Immune checkpoint inhibitors; Oral lesions; Oncological treatment

O5 SIDE EFFECTS OF IMMUNOTHERAPY AND BIOLOGICAL THERAPY ON THE ORAL MUCOSA: A REPORT OF TWO CASES

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Introduction: Immunotherapy has been used for over 100 years, but its modern form has become more widespread in the 2010s and is used to treat various types of cancer (melanoma, lung cancer, kidney cancer). The aim of immunotherapy is to activate or modify the immune system so that it recognises and destroys cancer cells. Biologics are a broad group of drugs in which proteins, monoclonal antibodies and other biological substances are used to target specific molecules or cells, usually to alleviate the symptoms of a disease or to direct the immune system against the disease. Materials and methods: This is a report of two cases. The first patient was a 65-year-old man who was treated with immune checkpoint inhibitors (ICI) for renal cell carcinoma and developed sicca syndrome as a side effect. The second patient was a 74-year-old man who was treated with an interleukin-17A (IL-17A) inhibitor for psoriasis (PsO) and psoriatic arthritis (PsA) and developed chronic hyperplastic candidiasis (CHC) as a side effect. Results: The clinical oral findings of the first patient were consistent with sicca syndrome (dry, sticky oral mucosa). The results of sialometry showed hyposalivation. The patient was treated topically (2% pilocarpine drops) to restore salivary gland function. The clinical oral findings in the second patient were white, thick, non-scratching keratotic lesions on the tongue, bilaterally and symmetrically distributed. The patient was then treated with systemic and topical antifungal therapy. Conclusions: Although oral side effects of immunotherapy and biological therapy are rare, the therapeutic approach must be multidisciplinary. Dentists and specialists (oncology, clinical immunology, dermatovenerology) should be familiar with the oral side effects of immunotherapies and biological therapies so that patients can receive timely diagnosis and therapy through simultaneous monitoring. This can avoid potentially undesirable consequences for oral and systemic health and improve the quality of life (QoL) of immunocompromised patients.
Key words: Side effects; Immunotherapy; Biological therapy; Sicca syndrome; Chronic hyperplastic candidiasis

O6 XGEVA – A NEW-OLD POTENTIAL PROBLEM IN THE TREATMENT OF MRONJ

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Introduction: Medication related osteonecrosis of the jaw (MRONJ) is a real challenge in diagnosis, monitoring and treatment due to its unpredictability. MRONJ was most often caused by zolendronate acid, which was prescribed in patients who developed bone metastases. In the past few years, zolendronate acid has been replaced in some specific cases by denosumab (Xgeva), which also shows high potency in causing MRONJ. This lecture will present a series of patients who developed MRONJ from Xgeva, as well as new protocols in the treatment of the disease itself.
Key words: Xgeva; MRONJ; Osteonecrosis of the jaw; Oncology; Treatment

O7 ORAL LICHEN PLANUS – FROM CHRONIC LESION TO A POTENTIALLY MALIGNANT DISORDER: CHALLENGES IN CLINICAL PRACTICE

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Introduction: Oral lichen planus (OLP) is classified as an oral potentially malignant disorder, with a malignant transformation rate of approximately 2.28%. Patients with OLP who develop oral cancer are at increased risk of developing second or multiple primary tumors compared to the general population. This is attributed to the concept of field cancerization, where the entire oral mucosa becomes prone to malignant change. We present a case of a 76-year-old female patient with a history of OLP, who presented with a burning sensation and pain in the right posterior mandible, worsened after molar extraction. Symptoms had persisted for about a month and were initially managed with sage tea rinses. Medical history revealed surgical removal of oral squamous cell carcinoma (OSCC) of the left side of the tongue in 2022, with regular follow-up by an otorhinolaryngologist. Three months after symptom resolution, a mildly elevated erythematous lesion was observed distal to the extraction site. It was clinically non-suspicious and excised under local anesthesia. Histopathology showed numerous keratin pearls. Continued monitoring was recommended. Four months later, an exophytic, clinically suspicious lesion appeared sublingually on the right side. The patient was referred to an otorhinolaryngologist, who recommended excision under general anesthesia. However, due to technical difficulties, the procedure was not performed, and the lesion spontaneously regressed. Eighteen months after initial presentation, a suspicious swelling with a velvety mucosal surface was observed distal to the right second premolar. Toluidine blue staining was positive. Histopathological analysis confirmed OSCC, and the patient was referred for surgical treatment.Conclusions: This case highlights the importance of lifelong, systematic, and prioritized clinical follow-up of patients with OLP, with particular attention to the early detection of malignant transformation, to ensure timely diagnosis and appropriate intervention.
Key words: Oral lichen planus; Oral potentially malignant disorder; Oral cancer; Follow-up

O8 EFFICACY OF INJECTABLE PRGF IN THE TREATMENT OF THE EROSIVE ORAL LICHEN PLANUS: A SPLIT-MOUTH, RANDOMIZED, CONTROLLED CLINICAL TRIAL

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Introduction: This study evaluated the efficacy of plasma rich in growth factors (PRGF) compared with topical corticosteroids, the current gold standard, in treating erosive oral lichen planus (EOLP). Materials and methods: Fifteen patients with biopsy-confirmed EOLP were enrolled in a split-mouth controlled trial. One side of the oral cavity was treated with PRGF, while the opposite side received topical corticosteroids. Both therapies were administered once weekly over four weeks. Clinical assessments were performed at baseline and at 7, 30, 60, and 90 days after the final application. At each visit, lesion size was measured, standardized photographs were taken, and patients rated pain and burning sensation for each side using a visual analog scale (VAS). Results: Both PRGF and corticosteroid treatments produced progressive reductions in lesion size, pain intensity, and burning sensation, resulting in improved quality of life. Statistical analysis revealed no significant differences between the two treatment groups. However, within-group comparisons across different time points showed significant improvements in both modalities. Importantly, no adverse effects were observed following PRGF administration. Conclusions: PRGF therapy demonstrated clinical outcomes comparable to those

of topical corticosteroids in managing EOLP, including reduction of pain, burning, and lesion size. Given its favorable safety profile and absence of adverse effects, PRGF may represent a promising alternative therapeutic approach. Further large-scale studies are warranted to validate these findings and to better define its role in the standard.
Key words: Oral lichen planus; Erosive oral lichen planus; Plasma rich in growth factors

O9 PENTOXYFILLINE IN THE TREATMENT OF RECURRENT APHTHOUS ULCERATIONS – A CASE REPORT

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Introduction: Recurrent aphthous ulcerations (RAU) are the most common autoimmune disease of the oral mucosa. In most patients, the symptoms are short-lived, successfully managed with topical therapy, and do not impact the quality of life. Materials and methods: However, in a smaller proportion of patients, RAU occur continuously, significantly reduce quality of life, and cannot be controlled with topical therapy. Results: One of the agents used in the systemic treatment of RAU is pentoxifylline. Pentoxifylline shows similar efficacy but a better safety profile compared to other immunosuppressive drugs. Conclusions: This lecture will present two patient cases in which RAU were brought under control with the use of pentoxifylline.
Key words:Recurrent aphthous ulcerations; Systemic treatment; Side-effects; Pentoxyfilline

O10 KERATOACANTHOMA-LIKE SQUAMOUS CELL CARCINOMA OF THE LIP- A CASE REPORT

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Introduction: Keratoacanthoma-like squamous cell carcinoma (SCC-KA) often mimics benign keratoacanthoma clinically and histologically, which makes diagnosis difficult and may influence the therapeutic approach. Materials and methods: Case presentation An 82-year-old female patient presented with "painful and moist crusts" on both lips and keratotic lesion on the lower lip, which had been present for the past six months. The lesion on the lower lip resembled a cutaneous horn, approximately 4 mm in diameter. She received topical therapy with 5% salicylic acid in petroleum jelly for the crusts on the lips. After a week of therapy, the appearance of the lips was normal, but the keratotic lesion had increased in size. The differential diagnosis included keratoacanthoma, cutaneous horn, basal cell carcinoma, or squamous cell carcinoma. The patient was referred to a head and neck surgeon. By the time of surgery, the lesion had visibly grown. After an excisional biopsy, the histopathological findings revealed a well-differentiated squamous cell carcinoma resembling keratoacanthoma. The lesion was surgically removed and, due to the proximity of the healthy margin, re-excised. The postoperative course was uneventful. After re-excision, the patient reported a significantly reduced oral opening and the inability to wear a lower partial denture. The differential diagnosis between keratoacanthoma and differentiated squamous cell carcinoma resembling keratoacanthoma requires careful histopathological analysis, as both entities present clinically almost identically. Keratoacanthoma is treated surgically or, less commonly, with methotrexate or 5-fluorouracil injections, and does not tend to metastasize. In contrast to keratoacanthoma, squamous cell carcinoma has the potential for invasive growth and metastasis, requiring a more aggressive therapeutic approach. Timely surgical treatment remains the treatment of choice. Conclusions: Any rapidly growing keratotic lesion on the lip requires biopsy and histopathological verification. Timely recognition of SCC-KA type enables adequate treatment and prevents the development of more serious complications.
Key words: Keratoacanthoma; Keratoacanthoma-like; Squamous cell carcinoma

O11 ORAL SQUAMOUS CELL CARCINOMA DETECTED IN A MULTIPLE MYELOMA PATIENT PRIOR TO AUTOLOGOUS TRANSPLANTATION

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Introduction: Oral cavity examination is a mandatory part of pre-transplant evaluation for hematopoietic stem cell transplantation (HSCT), aimed at minimizing infectious risks and ensuring oral health. Beyond the elimination of odontogenic foci, thorough mucosal inspection may reveal conditions that contraindicate transplantation. Materials and methods: We present the case of a 65-year-old woman with multiple myeloma (MM) referred for pre-transplant oral cavity examination before a repeated autologous HSCT. The patient had previously received chemotherapy, radiotherapy, and autografting. Results: Clinical evaluation revealed an ulcerated lesion on the left palatoglossal arch and retromolar region, asymptomatic but suspicious. Toluidine blue staining and biopsy confirmed oral squamous cell carcinoma (OSCC). Imaging excluded dissemination. The planned HSCT was cancelled, and the patient underwent radical surgery with tracheotomy and neck dissection, followed by adjuvant radiotherapy. Despite postoperative complications, she recovered successfully, and eight years later she remains in remission from both MM and OSCC. Conclusions: This case underscores the significance of oral cavity examination not only in identifying infectious sources but also in detecting malignant lesions that contraindicate transplantation. Careful mucosal inspection should be an integral part of pre-HSCT protocols. Multidisciplinary collaboration between hematologists, oral medicine specialists, and oncologic surgeons is essential for proper treatment sequencing and improved survival.
Key words: Multiple myeloma; Autologous stem cell transplantation; Oral squamous cell carcinoma; Oral cavity examination; Multidisciplinary management

O12 A PERIODONTAL APPROACH WITHIN INTERDISCIPLINARY HOSPITAL DENTAL CARE

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Introduction: Hospital dentistry requires a multidisciplinary approach to provide comprehensive care for patients with complex systemic conditions and surgical indications. Within this framework, the periodontist plays a pivotal clinical role in maintaining oral health and preventing systemic complications associated with periodontal disease. Materials and methods: Early diagnosis and treatment of gingivitis and periodontitis reduce the risk of infectious foci, particularly in immunocompromised individuals, transplant candidates, oncology patients, and those undergoing cardiac or orthopedic surgery. Patients receiving antiresorptive therapy (bisphosphonates, denosumab) are at increased risk of medication-related osteonecrosis of the jaw (MRONJ), while those on anticoagulant or antiplatelet therapy require careful bleeding risk assessment and individualized treatment planning. Results: A cornerstone of periodontal care in the hospital setting is prevention through patient education—empowering patients and their families to maintain proper oral hygiene, adapt routines to systemic conditions and medications, and remain motivated for long-term oral health. In addition, training healthcare staff in basic oral hygiene protocols for hospitalized patients reduces the incidence of infections, including respiratory infections in mechanically ventilated patients. Conclusions: By combining clinical treatment, prevention, and education, the integration of periodontists into hospital-based dental teams improves prognosis, minimizes complications, and enhances patients' quality of life.
Key words: Periodontology; Hospital Dentistry;Multidisciplinary Care; Antiresorptive Drugs, Anticoagulants

O13 CASE REPORT OF A PATIENT WITH ORAL MALIGNANCY AS AN ILLUSTRATION OF THE IMPORTANCE OF HOSPITAL DENTISTRY IN THE MULTIDISCIPLINARY MANAGEMENT OF ORAL CANCER

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Introduction: Collaboration between doctors of dental medicine and maxillofacial surgeons is essential in the treatment of complex patients with diseases of the stomatognathic system. A multidisciplinary approach is particularly important in patients with oral cancer. Through this case report we aim to emphasize that such collaboration can be lifesaving. Materials and methods: A 76-year-old male patient was referred to a maxillofacial surgeon due to a tumor lesion of the gingival mucosa in the upper jaw. Since January 2023, he had been under regular follow-up by an oral medicine specialist for the same lesion, which first appeared in December 2022. The lesion occasionally bled during tooth brushing. The first biopsy revealed epithelial hyperplasia as part of a reactive process, which could also be consistent with drug-induced gingival hyperplasia. Due to persistence of the lesion, an excisional biopsy was performed, and histopathology showed chronic inflammatory changes with papillary mucosal thickening. In July 2024, the patient presented to a maxillofacial surgeon who performed a new biopsy, again showing inflammatory

changes. CT of the paranasal sinuses described an osteolytic lesion in the frontal maxilla, interpreted as inflammatory in nature, without pathological post-contrast enhancement. In October 2024, a wide excision biopsy was performed under general anesthesia, which confirmed squamous cell carcinoma, p16–.Results: The patient was presented to the multidisciplinary head and neck tumor board at University Hospital Centre Zagreb, which recommended surgical treatment. Following surgery, adjuvant chemoradiotherapy was administered based on disease stage. After completion of oncologic treatment, the patient was referred to a prosthodontist for fabrication of an obturator prosthesis. Conclusions: The treatment of patients with oral cancer begins with oral cavity examination. Dentists play a crucial role, as they are often the first to suspect malignancy in its earliest stage. By timely referral, adequate diagnostics, and multidisciplinary management, patients are given the best chance of survival and recovery.
Key words: Oral cancer; Hospital dentistry; Multidisciplinary team

O14 ORAL ULCERATIONS IN A KIDNEY TRANSPLANT RECIPIENT – A CASE REPORT

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Introduction: Oral lesions are frequent in solid organ transplant recipients and may result from infections, graft-versus-host disease (GVHD), or adverse drug reactions. Proper recognition of the underlying etiology is essential for quality of life and therapeutic management.Materials and methods: Case presentation: A 70-year-old male patient underwent cadaveric kidney transplantation on February 2, 2025. Three months later, he developed painful ulcerations of the lower lip and buccal mucosa. At the time, his immunosuppressive therapy included tacrolimus (Prograf), mycophenolate sodium (Myfortic), and valganciclovir (Valcyte). Persistent leukopenia (1.6–2.5 $\times 10^9$/L) and elevated CRP were noted, while CMV DNA PCR was negative. Oral lesions partially improved with topical corticosteroids, including perilesional triamcinolone injection. Results: Despite supportive therapy, lesions persisted until July 3, 2025, when mycophenolate was discontinued and everolimus (Certican) was introduced. Subsequently, a rapid hematological recovery (leukocytes 5.6 $\times 10^9$/L by July 29) and clinical improvement of oral mucosa were recorded. Conclusions: Mycophenolate-associated ulcerations are well documented in transplant patients and typically resolve after discontinuation. In this case, valganciclovir-induced leukopenia likely contributed to mucosal vulnerability. Tacrolimus was a less probable factor, and GVHD after kidney transplantation is extremely rare. The case highlights the importance of recognizing drug-induced mucosal toxicity, applying a dechallenge approach, and anticipating the risk of mTOR inhibitor-associated stomatitis during everolimus therapy.
Key words: Mycophenolate; Valganciclovir; Tacrolimus; Everolimus; Oral ulcerations

Residents' Presentations

R1 CHIN WING OSTEOTOMY

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Introduction: The "chin wing" osteotomy was first described and done by Albino Triaca in 2009. and was performed for the first time at the Clinical Hospital Centre Rijeka in 2024. The primary objective of this technique is to correct facial asymmetry and establish harmony within the lower third of the face. It is a surgical technique in which the osteotomy is performed along the lower border of the mandible, treating the entire lower border as a single anatomical unit that is repositioned, without affecting the occlusal plane. Materials and methods: The "chin wing" osteotomy allows for modification of chin position, adjustment of facial width in the mandibular angle region, and improvement of lip competence. A 22-year-old female patient underwent bimaxillary osteotomy in September 2023 due to a skeletal Class III jaw deformity. The postoperative course was regularly monitored, and nine months later, a "chin wing" osteotomy was indicated due to excessive mandibular width and a prominent chin. The procedure was performed via a mucosal incision in the lower vestibule, followed by elevation of mucoperiosteum and execution of a bicortical osteotomy along the inferior border of the mandible, with careful preservation of the mandibular canal. In the anterior mandibular region, a segmental ostectomy of the chin was performed, allowing for approximation of the bony fragments. This resulted in both chin reduction and narrowing of the mandibular angle region.
Results: The postoperative course was uneventful, with progressive resolution of swelling. At the three-month follow-up, a satisfactory aesthetic outcome was observed, with the patient expressing high satisfaction with the postoperative results. Conclusions: The "chin wing" osteotomy represents a reliable and effective surgical option for orthodontically compensated patients who would benefit aesthetically from mandibular contouring. It offers both functional and aesthetic enhancement of the lower third of the face, with minimal morbidity and high patient satisfaction.
Key words: Osteotomy; Occlusal plane; Facial asymmetry; Ostectomy; Aesthetic

R2 TREATMENT OF A LARGE MANDIBULAR CYST UNDER LOCAL ANESTHESIA – CASE REPORT

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Introduction: Jaw cysts are relatively common pathological changes in the maxillofacial region, with their size, location, and histological type determining both treatment strategy and prognosis. Large mandibular cysts may cause bone deformities, displacement or resorption of teeth, and increase the risk of pathological fractures. Standard management includes enucleation, marsupialization, or combined surgical approaches, depending on the lesion's extent.Materials and methods: This case report describes the surgical treatment of a large mandibular cyst performed under local anesthesia. Enucleation was carried out with careful preservation of vital mandibular structures. Particular attention was given to the inferior alveolar and mental nerves, minimizing the risk of postoperative complications such as paresthesia or loss of tooth vitality. Complete enucleation of the cystic lining was achieved, followed by curettage of the surrounding bone to reduce recurrence risk. The surgical wound was adapted for optimal healing, while postoperative care included antibiotics, analgesics, clinical check-ups, and radiological monitoring of bone repair. Results: Early recognition and diagnosis of large mandibular cysts, supported by thorough radiological evaluation and careful surgical planning, are key to successful management. Timely intervention prevents progressive damage to bone and soft tissues, reduces fracture risk, and safeguards adjacent anatomical structures. Conclusions: Such a comprehensive approach not only lowers the likelihood of recurrence and complications but also helps preserve the functional integrity of the stomatognathic system. At the same time, favorable aesthetic outcomes improve patient quality of life, restore natural facial contours, and provide a stable foundation for future dental or implant-prosthetic rehabilitation.
Key words:Mandibular cyst; Enucleation; Local anesthesia; Oral surgery

R3 PIEZOELECTRIC SURGERY ASSISTED SECOND MOLAR REMOVAL

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Introduction: Impaction occurs when a tooth fails to erupt into the dental arch within the expected period due to physical obstruction. Mandibular molars are the most commonly impacted teeth, often in close proximity to the inferior alveolar nerve (IAN). This case report describes the management of a vertically impacted mandibular second molar with complete IAN encasement.Materials and methods: A 27-year-old female presented with pain in the left mandible. Clinical examination revealed an exposed distobuccal cusp of tooth 38 with healthy surrounding mucosa. Panoramic radiography and CBCT identified a horizontally positioned third molar (38) and a vertically impacted, carious second molar (37) reaching the inferior border of the mandible. Coronal CBCT sections demonstrated complete encasement of the IAN between the buccal and lingual roots of tooth 37. Because of pulpal involvement, alveotomy was indicated. Standard root separation with rotary instruments was deemed to carry excessive risk of IAN damage. Therefore, the surgical plan was modified to incorporate piezoelectric osteotomy. Following alveotomy of tooth 38 and removal of the crown of tooth 37 using conventional techniques, piezoelectric instrumentation was employed to separate the roots and achieve atraumatic extraction. Results: Surgery was completed without intraoperative complications. Fourteen days postoperatively, sutures were removed. Clinical findings were within normal limits, and the patient reported intact neurosensory function in the IAN distribution. Conclusions: Although piezoelectric devices are not routine in oral surgery, they provide advantages in complex cases involving intimate IAN relationships. Their ability to perform micrometric, selective cutting reduces the risk of nerve injury compared with rotary instruments. In this case, piezoelectric osteotomy facilitated atraumatic root separation and preservation of IAN integrity. Thus, piezoelectric surgery should be considered the method of choice when managing impacted mandibular molars with close IAN involvement.
Key words: Impacted tooth; Mandibular molar; Alveotomy; Inferior alveolar nerve; Piezoelectric osteotomy

R4 FIRST BILATERAL TOTAL TEMPOROMANDIBULAR JOINT REPLACEMENT IN CROATIA: CASE REPORT

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Introduction: Total joint replacement of the temporomandibular joint represents the most advanced form of reconstructive treatment for irreversible joint pathology. Indications include severe deformities, ankylosis, and degenerative changes resistant to conservative or surgical treatment. The primary goals are restoration of mandibular function, pain reduction, and improved quality of life. Materials and methods:A 70-year-old female patient with a long-standing history of bilateral TMJ dysfunction and severe pain was admitted for planned bilateral condylectomy and total joint replacement. Thirty-six years earlier, she underwent arthroplasty with silicone implant placement, which was later removed in 2016 due to complications. Over the past two years, she received bilateral joint lavage with PRGF application, followed by bilateral arthroplasty with a temporal muscle flap and high condylectomy. Despite multiple interventions, she continued to experience severe bilateral pain (VAS 10/10) and limited mouth opening of 22 mm. Given the persistence of symptoms, bilateral total TMJ replacement was indicated. In June 2025, surgery was performed following preoperative planning and fabrication of patient-specific models and prostheses in an external facility. Bilateral Blair incisions were made to expose the glenoid fossa and mandible. Using custom surgical and drilling guides, resection of the mandible and temporal bone was performed bilaterally, followed by preparation of screw sites. Bilateral total joint prostheses were placed and subsequently covered with the temporal muscle. Intermaxillary fixation screws were positioned intraorally. Results:The postoperative course was uneventful, and the patient was discharged in stable condition. At follow-up, residual pain was reported only on the right side, with reduced intensity. Maximal mouth opening improved to 27 mm. Conclusions: Bilateral total TMJ replacement proved to be a safe and effective treatment for advanced, irreversible joint pathology refractory to prior interventions. This case demonstrates postoperative pain reduction and functional improvement without perioperative complications. Long-term follow-up remains essential to evaluate prosthesis stability and overall clinical outcomes.
Key words: Temporomandibular joint; Bilateral TMJ prosthesis; TMJ dysfunction

R5 POSTEXTRACTION BLEEDING - THE FIRST SIGN OF HEMOPHILIA

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Introduction: Patients with congenital coagulation defects characteristically bleed into muscles, joints, and body cavities hours or days after an injury. Hemophilia A and B are most common hereditary bleeding disorders caused by congenital deficiency or defect of coagulation factor VIII or IX. Hemophilia A and B are X-linked recessive disorders and the affected are mostly males. Materials and methods: A six-year-old boy was brought to the emergency department of the Oral and Maxillofacial Surgery Department of Dubrava University Hospital due to bleeding from the post-extraction wound of the right second deciduous molar. The patient initially received treatment at the Dental Polyclinic in Zagreb, where the wound was sutured and iodoform dressing was applied, however, the bleeding persisted. At Dubrava University Hospital, after three wound revisions under local anesthesia and one under general anesthesia, the bleeding continued. Laboratory results revealed prolonged activated partial thromboplastin time (aPTT), low MCV, and elevated MCHC, while other coagulation parameters were normal. Following the most recent episode of bleeding and wound revision, a hematologist was consulted, and the child was transferred to the Pediatric Hematology Clinic at the University Hospital Center Zagreb, where a complete coagulation analysis confirmed the diagnosis of severe hemophilia A. Results: Recombinant factor VIII was administered due to a deficiency in factor VIII activity, which was measured at 0.01 IU/dL at the time, and the parents were advised to administer 1000 IU of recombinant factor three times a week as prophylaxis. Conclusions: In addition to local factors such as trauma or inflammation, systemic diseases such as leukemia and hemophilia can also be the cause of subsequent bleeding. This case report shows that in cases of prolonged and recurrent postoperative bleeding, the possibility of unknown hemophilia should always be kept in mind.
Key words: Hemophilia; Bleeding; Tooth extraction; Hemostasis

R6 BUCCAL SPACE ABSCESS IN A PATIENT WITH PENICILLIN ALLERGY AND BACTERIAL RESISTENCE TO CLINDAMYCIN: A CASE REPORT

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Introduction: Odontogenic abscesses in the maxillofacial region are primarily caused by bacteria that are part of the oral microbiome. A key principle in managing these infections is to eliminate the source of infection and antibiotics are only indicated as an adjunctive measure. Materials and methods:A 20-year-old female patient presented with clinical signs of swelling in the right buccal area. Due to a reported allergy to penicillin, clindamycin was prescribed by a dentist and trepanation of the upper right first premolar was performed. After two days, her condition worsened, and she was referred to the Department of Oral and Maxillofacial Surgery, University Hospital Centre Split, where incision and drainage were performed, and a CBCT scan was obtained. Given the difficulty in identifying the causative tooth and the worsening clinical presentation, a swab was collected and sent for microbiological analysis. Microbiological analysis revealed that the isolated bacterium Streptococcus anginosus was sensitive to β-lactams but resistant to clindamycin. Cefuroxime was selected and administered orally. Due to the potential risk of cross-reactivity between penicillins and cephalosporins, the patient was hospitalized and monitored. After three days of clinical improvement, the patient was discharged from the hospital and referred to her dentist for endodontic treatment of the upper right first molar, which was identified as the true source of infection.Results: Cases similar to this one prompted us to conduct a clinical study on 378 microbiological swabs at the University Hospital Centre Split, where the most frequently isolated bacterium, Streptococcus anginosus, exhibited resistance to clindamycin in 32.14% of cases while demonstrating 100% susceptibility to β-lactams.Conclusions: Although hypersensitivity cross-reactions to cephalosporins have been documented, the risk-benefit ratio should be carefully evaluated, as the incidence of such reactions is reported to be very low, whereas bacterial susceptibility remains high.
Key words: Odontogenic abscess; Antibiotic; Allergy; Resistance; Cross-reaction

R7 PERFORATION OF HYPOPHARYNX AND CERVICAL ESOPHAGUS CAUSED BY BLUNT TRAUMA DURING CONSENSUAL FELLATIO: A SURGICAL MANAGEMENT APPROACH

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Introduction: Pharyngo-esophageal perforation is a rare but potentially fatal condition requiring prompt recognition and management. While causes often include iatrogenic injuries during endoscopic procedures, traumatic mechanisms such as blunt force during sexual activity are exceedingly uncommon. Timely diagnosis and appropriate intervention are critical, as delayed treatment significantly increases mortality.Materials and methods: We present the case of a young woman who developed a hypopharyngeal and cervical esophageal perforation following consensual fellatio. Initially presenting with odynophagia and sore throat, she was discharged with oral antibiotics. Two days later, she returned with aphagia and subcutaneous emphysema. Blood tests revealed elevated inflammatory markers, prompting a CT scan which demonstrated extensive cervical emphysema and mediastinal involvement. She was admitted, made nil-by-mouth, and started on intravenous antibiotics before undergoing diagnostic esophagoscopy and urgent surgical intervention. Results: Intraoperative findings included a 6 cm rupture of the hypopharynx and cervical esophagus with necrosis of the prevertebral fascia. Surgical management involved bilateral cervicotomy, extensive debridement, two-layer closure of the perforation, and placement of multiple drainage tubes. Postoperatively, the patient was managed in the ICU with broad-spectrum antibiotics tailored to culture results (Staphylococcus aureus and Streptococcus spp). She recovered steadily, resumed oral intake by day nine, and was discharged after 17 days of intravenous antibiotics and 14 additional days of oral therapy. At one-month follow-up, she had fully recovered with normal swallowing and no complications. Conclusions: This case underscores the importance of high clinical suspicion in atypical presentations of neck pain and odynophagia. Pharyngo-esophageal perforation, even when caused by uncommon mechanisms, requires timely imaging and often surgical management. A multidisciplinary approach, early intervention, and vigilant postoperative care are key to reducing morbidity and ensuring complete recovery.
Key words: Hypopharynx; Esophagus; Fellatio; Mediastinitis; Cervicotomy

R8 MAKE FOREHEAD GREAT AGAIN

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Introduction: Skin defects are an ongoing challenge in head and neck reconstructive surgery. The goal of reconstruction is to select the optimal technique that ensures both functional integrity and aesthetic outcome. Tissue expanders significantly enhance the versatility of local flaps and contribute to achieving these goals. Materials and methods: We present a case report of a female patient undergoing surgery for a solitary fibrous tumor of the forehead and scalp. Tissue expanders were utilized in the reconstruction of the postablative defect to improve both functional and cosmetic results. Results: Tissue expanders were placed in the planned reconstruction area three months prior to tumor excision and were gradually inflated every few days. Following tumor removal, the defect was reconstructed using a local rotational skin flap utilizing the excess skin created by the expanders. The patient had an uneventful postoperative recovery, with complete healing observed

during follow up. This method of reconstruction provided a functionally and aesthetically favorable outcome, preserving hair growth and resulting in minimal donor site morbidity. Conclusions: Tissue expanders offer several advantages in local flap reconstruction. They represent a safe and effective technique for achieving complete closure of large skin defects while maintaining optimal function and aesthetics. Their use results in minimal donor site morbidity and enhances the feasibility of local tissue reconstruction in challenging anatomical areas. Although it involves a multistage process and may cause temporary discomfort or disfigurement, the long-term benefits strongly outweigh these drawbacks. Tissue expanders should be considered a valuable tool in reconstructive strategies for challenging anatomical regions.
Key words: Tissue Expander; Forehead Reconstruction; Skin Reconstruction; Solitary Fibrous Tumor

R9 AMELOBLASTIC FIBRO-ODONTOMA - CASE REPORT

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Introduction: Ameloblastic fibro-odontoma is a rare, benign, mixed odontogenic tumor, most commonly occurring in children and adolescents, usually before the age of 20. By its characteristics, it is more often considered a hamartoma rather than a true neoplasm. Etiologically, it is thought to result from developmental disturbances of the odontogenic matrix, and histologically it consists of components of ameloblastic fibroma (epithelial and ectomesenchymal odontogenic cells) together with the presence of hard dental tissues (dentin, enamel). It most often appears in the posterior regions of the jaws, with more than 50% found in the posterior region of the mandible. Clinically, it usually presents as a painless, slow-growing osteolytic lesion associated with an impacted tooth, and radiographically it shows a well-defined, most often unilocular radiolucent lesion containing calcified material. It may interfere with normal tooth eruption. The therapy of choice is complete surgical removal by enucleation/curettage of the lesion. Local recurrence is very rare. Materials and methods: A 13-year-old male patient presented with an osteolytic lesion in the left side of mandible. The lesion was incidentally discovered radiographically, as the patient had no subjective symptoms. Results:Under local anesthesia, the lesion was extirpated with careful dissection of the inferior alveolar nerve. The deeply impacted third molar was not removed due to the high risk of mandibular fracture. Histopathological examination confirmed the diagnosis of ameloblastic fibro-odontoma. Because of the extent of the lesion beneath the left first mandibular molar and the retention of the impacted third molar, a decompression tube was placed for the following 3.5 months.Conclusions: Clinical and radiographic follow-up showed satisfactory healing, with evident new bone formation in the postoperative cavity. The patient reported no subjective complaints during or after the procedure. Sensibility of the inferior alveolar nerve was preserved.
Key words: Ameloblastic fibroma; Odontoma; Odontogenic tumor; Enucleation

R10 OROANTRAL FISTULA CAUSED BY A RETAINED TOOTH IN THE MAXILLARY SINUS

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Introduction: Oroantral fistula (OAF) is a pathological communication between the oral cavity and the maxillary sinus, often following extraction of upper molars. If the etiological agent—such as a tooth retained in the sinus—remains unrecognized, the fistula may persist and lead to chronic maxillary sinusitis. Early and accurate diagnosis is essential for effective, minimally invasive treatment. Materials and methods: A 44-year-old patient presented with a one-year persistent oroantral fistula and chronic maxillary sinusitis following extraction of tooth 17. Multiple prior attempts at surgical closure, endoscopic sinusoscopy, sinus lavage, and both oral and parenteral antibiotic therapy guided by microbiological culture were unsuccessful. Clinical examination confirmed the persistent fistula, and cone-beam computed tomography (CBCT) revealed tooth 17 lodged in the maxillary sinus. Surgical exploration and removal of the retained tooth from the sinus were performed. Results: Following surgery, the fistula closed spontaneously within two weeks, with complete resolution of sinusitis symptoms. At follow-up examinations, the patient remained symptom-free. Conclusions: This case underscores the importance of a thorough patient history and CBCT for accurate diagnosis of chronic OAF. Removal of the retained tooth from the maxillary sinus addressed the root cause, leading to spontaneous closure of the fistula and resolution of symptoms without additional procedures.
Key words: Oroantral Fistula; Maxillary Sinus; Retained Tooth; Sinusitis

R11 EMERGING BIOMARKERS AND ARTIFICIAL INTELLIGENCE FOR CLINICAL DECISION-MAKING IN THE MANAGEMENT OF THE CLINICALLY NODE-NEGATIVE NECK IN ORAL SQUAMOUS CELL CANCER

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Introduction: Management of the clinically node-negative (cN0) neck in oral squamous cell carcinoma (OSCC) remains controversial. Following clinical assessment, 20%-30% of cN0 patients harbor occult lymph node metastases (OLNM). While elective neck dissection (END) improves outcome, it subjects many patients to unnecessary morbidity. Advanced prognostic tools are needed to improve patient stratification and personalize treatment. Materials and methods:A narrative literature review was conducted including only peer-reviewed articles from Q1 journals. The review focused on recent advances in prognostic biomarkers, gene expression profiling, and computational models that integrate clinical and molecular data to predict occult metastasis and guide treatment decisions in cN0 oral squamous cell carcinoma.Results:Multiple biomarkers related to tumor angiogenesis, lymphangiogenesis, and microenvironment remodeling have demonstrated potential in predicting metastatic risk, though their routine clinical application remains limited by lack of standardization and accessibility. Emerging gene expression profiling platforms offer comprehensive tumor characterization and prognostic stratification, capable of identifying patients with low risk of occult metastasis. Furthermore, machine learning algorithms leveraging histopathological parameters and biomarker data have shown promising predictive accuracy and may support clinical decision-making by integrating complex multilayered information. Conclusions: The integration of molecular and genetic profiling with computational models represents a promising shift toward precision oncology in OSCC. These approaches can enhance risk assessment and reduce overtreatment, ultimately improving patient outcomes. Challenges remain in clinical translation due to technical complexity, variability in biomarker assessment, and resource constraints. Ongoing validation and implementation studies are necessary to realize their full potential, particularly as novel systemic therapies emerge to complement surgical management.
Key words: Oral sqamous cell carcinoma; Occult lymph node metastases; Biomarkers

R12 OSTEOMYELITIS OR MRONJ STAGE 3 IN THE MANDIBULE? : A CASE REPORT

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Introduction: Osteomyelitis of the jaw is an inflammatory disease typically caused by odontogenic infection or trauma. Chronic forms of osteomyelitis can lead to osteonecrosis and sequestra formation. In recent years medication-related osteonecrosis of the jaws (MRONJ) has been recognized as a serious adverse effect of antiresorptive and antiangiogenic medications administrated for osteolytic bone lesions related to multiple myeloma and osseous metastases of solid cancer. While bone remodeling inhibition is one of the main hypothesized causes, inflammation and infection also play an important role in MRONJ development. Materials and methods: A 58-year-old female patient was referred to Department of Oral Surgery of Clinical Hospital Dubrava in Zagreb from Hematology Department for possibility of odontogenic cause of high CRP levels. The patient complained of chin pain within last year. Her medical history included multiple myeloma that was in remission and intravenous administration of pamidronate for 3 years and zoledronate intermittently for 4 years. Clinical examination revealed the presence of tooth roots from 35 to 45, erythematous gingiva and purulent drainage. Orthopantomography and CBCT showed presence of bone sequestra extending to the lower border of the mandible. Results: Treatment included extraction of tooth roots, sequestrectomy and antibiotic therapy. The postoperative period was uneventful. Clinical examination after 3 months showed complete healing and control CBCT revealed a new bone formation. Due to large defect, it was decided to place two implants in premolar region of mandible to ensure better retention of dental prosthesis. Implant placement was uneventful, and patients is under further monitoring. Conclusions: Osteomyelitis and MRONJ have similar clinical and radiographic characteristic which can make diagnosis challenging. Although treatment for these conditions is similar, response to the therapy can vary.
Key words: Osteomyelitis; MRONJ; Multiple myeloma; Osteonecrosis

R13 RNA BIOMARKERS OF ORAL CARCINOMA

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Introduction: Oral squamous cell carcinoma (OSCC) is the sixth most common cancer worldwide, with over 350,000 new cases diagnosed annually. The disease is often insidious in onset and typically diagnosed at an advanced stage, contributing to high treatment costs and relatively low overall survival rates. Biomarkers are molecular indicators of biological processes and offer a promising tool for early detection, prognosis, and therapy monitoring. Materials and methods: While various biomarkers have been investigated for OSCC, recent attention has focused on RNA-based markers, particularly non-coding RNAs. These molecules, once considered „cellular garbage," are now recognized for their roles in gene regulation and tumor progression. Saliva and blood are easily accessible and non invasive biofluids and provide a convenient medium for detecting changes in RNA expression even in preclinical stages of the disease. Results: Studies have shown that several microRNAs (e.g., miR-1307-5p, miR-3928) and circular RNAs (e.g., hsa_circ_0001874) are overexpressed in OSCC and in premalignant lesions like oral lichen planus. In blood samples, transcripts such as ENST00000412740, NR_131012, and miR-21 have demonstrated diagnostic and prognostic potential. Additionally, RNA methylation, especially m6A modifications, have been implicated in the progression of OSCC and may serve as novel biomarkers. Conclusions: Advances in RNA sequencing technologies have facilitated the identification of molecular fingerprints associated with OSCC. A deeper understanding of RNA-based regulatory pathways can enable earlier, non-invasive diagnosis, better prediction of disease progression, and more personalized treatment approaches.

Key words:Oral cancer; OSCC; Biomarker; RNA

R14 INDUCED VASCULITIS AS A LATE COMPLICATION OF SURGICAL TREATMENT IN AN ONCOLOGICAL PATIENT – A CASE REPORT

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Introduction: Cocaine-induced vasculitis has been recognized as a clinical entity that mimics granulomatosis with polyangiitis, as it is characterized by upper respiratory tract involvement, various systemic manifestations such as skin ulcerations and the presence of ANCA autoantibodies. Surgically treated tissue represents a locus minoris resistentiae from an immunological perspective, as microstructural changes within the tissue create a favorable environment for autoimmune reactions. Materials and methods: A 59-year-old male was surgically treated for cutaneous melanoma in 2014. The procedures included excision, wide re-excision, sentinel lymph node biopsy, and modified radical neck dissection. Between September 2024 and May 2025, he was hospitalized on several occasions due to multiple subcutaneous nodules and necrotic ulcers in the previously operated area. Initially, clinical presentation and imaging findings could not exclude malignancy. Microbiological swabs were sterile, and multiple cytological and histological examinations indicated granulomatous inflammation without the presence of malignant cells. Infectious etiologies such as tuberculosis, bartonellosis, actinomycosis, and others were ruled out. Inflammatory markers were elevated, and serological testing confirmed presence of PR3-ANCA antibodies. Based on clinical, laboratory, and histopathological features (necrotizing granulomatous inflammation and small-vessel vasculitis), a systemic autoimmune vasculitis was suspected. Subsequently, the patient developed nasal septal perforation and ulceration in the oral cavity. Clinical and radiological findings showed progression, with extensive surface involvement and infiltration of deeper tissue layers. Results:A turning point in diagnosis and treatment was the toxicological analysis of urine, which tested positive for cocaine—previously denied by the patient. Following cessation of cocaine use, the patient was treated with corticosteroids, antibiotics, and methotrexate, resulting in significant clinical improvement. Conclusions: The case of PR3-ANCA-positive cocaine-induced vasculitis illustrates how sites of prior structural disruption may be more vulnerable to subsequent pathological processes. This case highlights the importance of thorough medical history-taking as well as multidisciplinary approach. In distinguishing idiopathic from substance-induced vasculitis, toxicological testing may be crucial.

Key words: Granulomatosis with polyangiitis; Cocaine-induced vasculitis; PR3-ANCA; Melanoma recurrence mimicry; Neck dissection complications

R15 CUSTOM-MADE FACE: 3D PRINTED IMPLANTS IN MAXILLOFACIAL RECONSTRUCTION

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Introduction: Reconstruction of craniofacial defects following tumor resection represents a significant surgical challenge. Advances in digital planning and additive manufacturing now enable the creation of patient-specific implants that provide precise anatomical restoration and improved functional and aesthetic outcomes. Materials and methods: We present three clinical cases of viscerocranial reconstruction using different materials. The first involved a patient with recurrent orbital chondrosarcoma affecting the frontal bone and lateral orbital wall. The second, a female patient with squamous-cell carcinoma infiltrating the orbital bones, underwent tumor resection followed by reconstruction with a custom-designed PEEK implant, planned preoperatively using CT data. In contrast, the third patient, following frontal bone tumor removal, received an intraoperatively shaped Palacos (PMMA) implant based on a 3D-printed negative model. Results: All three cases demonstrated successful anatomical reconstruction and satisfactory postoperative outcomes. When compared, custom-designed, 3D-printed implants (especially PEEK) offered superior accuracy, reduced surgical time, and more predictable aesthetic and functional results compared to intraoperatively shaped solutions. Conclusions: Our experience highlights the advantages of 3D-printed, patient-specific implants, including superior accuracy, reduced operative time, and enhanced functional and aesthetic outcomes, underscoring their growing role in modern maxillofacial reconstruction.

Key words: Reconstruction; PEEK implant; Palacos; 3D printed implants; Custom-made

R16 PERIORBITAL NECROTIZING FASCIITIS AT THE CLINICAL HOSPITAL CENTRE RIJEKA – A CASE REPORT

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Introduction: Necrotizing fasciitis is a rare, life-threatening infection characterized by rapid progression and significant destruction of the skin and soft tissue. It's much more common in the extremities and perineal region. While it's much rarer in the periorbital area and has lower mortality, it can result in serious consequences such as disfigurement, loss of vision, or septic shock. Materials and methods: A 55-year-old patient presented to the Emergency Department of the Clinical Hospital Center Rijeka due to swelling in the periorbital area. Two days earlier, he had sustained a wound that had not been medically treated. Upon arrival, laboratory tests were showing elevated inflammatory markers. After initial assessment, the patient was admitted to the Department of Maxillofacial Surgery, where his clinical condition significantly worsened within just a few hours. A necrectomy of the upper eyelid was immediately performed upon admission. During the procedure, most of the skin and deeper tissues of the upper eyelid were removed, and large amounts of purulent material were obtained. During postoperative recovery, dressing changes were carried out in the department, along with occasional additional necrectomies. Results: During the recovery, inflammatory markers declined and local signs of infection subsided. Due to the significant tissue defect and ptosis of the upper eyelid, plication of the levator palpebrae muscle and full-thickness skin graft transplantation were performed, along with the placement of a VAC device. Due to technical difficulties, necrosis of the transplanted skin occurred, and a second transplantation was performed, this time with a successfully maintained graft. Conclusions: Periorbital necrotizing fasciitis is a rare disease with potentially severe consequences, and rapid diagnosis and early initiation of treatment are critically important for patient recovery. Given that the condition affects the face, reconstruction of the resulting defects should also be considered in order to restore the patient's quality of life.

Key words: Necrotizing fasciitis; Periorbital; Necrectomy; Reconstruction

R17 PRIMARY NON-HODGKIN LYMPHOMA OF THE ORAL CAVITY MASKED BY PERIODONTAL DISEASE: A CASE REPORT

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Introduction: Non-Hodgkin lymphomas (NHL) are a heterogeneous group of lymphoproliferative neoplasms. They are characterized by the presence of malignantly transformed lymphocytes in lymph nodes, and less commonly primarily in other organs. Extranodal disease most frequently occurs in the gastrointestinal tract. 25 percent of extranodal lymphomas are found in Waldeyer's ring. Primary lymphomas of the oral cavity are rare, less than five percent. Due to the rarity of primary NHL in the oral cavity, its diagnosis and

treatment present a significant challenge, largely because of its nonspecific clinical presentation and low incidence. Symptoms as pain, swelling, and oral bleeding are often masked by the clinical picture of other oral diseases, which can delay accurate diagnosis and timely initiation of treatment. Materials and methods: We present the case of a 46year-old female patient with poor oral hygiene who wanted to replace an old metal-ceramic prosthetic restoration. After therapy, swelling, redness, and pain developed in the area of the reconstructed teeth. The clinical presentation suggested periodontal problems, an allergic reaction, or non-fitting prosthetic margins. Over a period of six months, multiple periodontal and diagnostic procedures were conducted without success. A biopsy ultimately confirmed the diagnosis of primary B-cell Non-Hodgkin lymphoma. Results: Due to nonspecific symptoms and overlap with common oral diseases, the diagnosis of primary NHL is often delayed. This case demonstrates how a malignant condition can be masked by the appearance of periodontitis, especially in patients with poor oral hygiene. Proper on-time biopsy is essential when standard therapy fails to result in improvement. Conclusions: Primary NHL of the oral cavity should be considered in the differential diagnosis of persistent, treatment-resistant oral lesions. Collaboration between dentists, pathologists, and hematologists is crucial for timely diagnosis and effective treatment. Despite initial remission after chemotherapy, this case resulted in relapse with a LETHAL outcome, indicating the aggressive nature of the disease.

Key words: Non-Hodgkin lymphoma; Extranodal localization; Differential diagnosis; Chemotherapy

R18 AMELOBLASTOMA - CASE REPORT

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Introduction: Ameloblastoma is the most common benign odontogenic tumor. Although slow growing, it is locally invasive and has a high recurrence rate. The aim of this report is to emphasize the role of comprehensive history, clinical and radiological evaluation, differential diagnosis, and histopathological confirmation in its management. A broad spectrum of diseases may exhibit overlapping symptoms and share similar clinical and radiological characteristics, thereby complicating the process of differential diagnosis. Nevertheless, variations in localization, growth dynamics and invasiveness, tumor size, and histopathological features — all of which critically influence the likelihood of recurrence — necessitate distinct therapeutic approaches and, consequently, determine the appropriate duration of post-treatment follow-up.
Materials and methods: Ameloblastoma originates from odontogenic epithelium and occurs most often between the ages of 30 and 60. It shows a strong predilection for the mandible (80–85%), particularly the molar, angle, and ramus regions, while maxillary cases are rare. Radiographically, it typically presents as a multilocular radiolucency with scalloped margins, producing a "soap-bubble" or "honeycomb" appearance. Root resorption and association with impacted third molars are common. Unilocular, cyst-like variants are less frequent. The definitive diagnosis relies on histopathological analysis. Results: The 2022 World Health Organization classification distinguishes five variants: conventional (solid/multilocular), peripheral, unicystic, metastasizing, and adenoid ameloblastoma. Histologically, follicular and plexiform subtypes predominate, whereas acanthomatous, granular cell, desmoplastic, and basal cell types are rare. Conclusions: Surgical management is the treatment of choice, but the extent of resection remains debated. Conservative methods such as enucleation are associated with recurrence rates of 70–90%. Radical approaches, including marginal or segmental resection with 1–2 cm of healthy bone, reduce recurrence but may compromise mandibular continuity. A combined approach—tumor enucleation with limited resection of adjacent bone—offers a potential balance but is unsuitable for recurrent cases. Given the possibility of late relapse, long-term patient follow-up is essential.

Key words: Ameloblastoma; Histopathology; Treatment; Recurrence; Classification

R19 LANGERHANS CELL HISTIOCYTOSIS IN THE MANDIBLE – CASE REPORT

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Introduction: Langerhans cell histiocytosis (LCH) is a disorder characterized by the proliferation of dendritic cells found throughout the body. It most commonly occurs in childhood but can also develop in adults. All patients show evidence of activation of the RAS-RAF-MEK-ERK signaling pathway, while some may also present with other genetic mutations commonly associated with this disease. The incidence is 5 to 8 cases per million children. Materials and methods: This is a case of a 73-year-old female patient who presented to the outpatient clinic of the Clinical Department of Oral Surgery at University Hospital Center Zagreb due to pain in the anterior region of the lower jaw. Clinical and radiological findings revealed extensive bone destruction. Results: Extraction of four incisors in the affected region was performed, followed by a bone biopsy. Histopathological analysis showed clusters of typical Langerhans cells surrounded by proliferating eosinophils. Atypical cells were immunohistochemically S100+, CD1a+, BRAF (VE1)-. Further diagnostic workup included whole-body positron emission tomography and low-dose CT for attenuation correction and anatomical localization of lesions accumulating radiopharmaceuticals, with the use of oral contrast agents. Analysis revealed increased glucose metabolism in the lower jaw region where the procedure had been performed, as well as in lymph nodes on both sides of the neck and in the mediastinum. A lymph node biopsy from the neck was performed to confirm the working diagnosis and determine the treatment modality. The hematology consultation recommended initiating treatment with cladribine. Conclusions: The prognosis of the disease is influenced by the involvement of risk organs, which include the liver, spleen, and hematopoietic system organs. Involvement of these organs and the multisystemic form represent a poor prognosis, while single-system involvement and multisystemic disease without risk organ involvement are considered low-risk forms. Treatment of such conditions requires an interdisciplinary approach and long-term monitoring.

Key words: Histiocytosis; Langerhans cells; Lower jaw; Chemotherapy; Biopsy

R20 METASTASIS OF URINARY BLADDER CARCINOMA IN THE ORAL CAVITY AS THE FIRST SIGN OF DISEASE RECURRENCE

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Introduction: Urothelial carcinoma (transitional cell carcinoma) is the most common malignant tumor of the urinary bladder. It typically spreads to the lungs, liver, bones, and lymph nodes, while oral cavity metastases are extremely rare and described only in isolated case reports. Because of their unusual presentation, such lesions are often mistaken for primary oral tumors or benign changes, which can delay diagnosis.Materials and methods: We present a 70-year-old male with a previous history of urinary bladder carcinoma, that has been treated with transurethral resection and intravesical therapy. The patient reported to the Department of Oral and Maxillofacial Surgery with a rapidly growing lesion in the maxillary region. Clinical examination revealed an exophytic mass. Imaging and subsequent incisional biopsy were performed. Histopathology confirmed metastatic urothelial carcinoma.Results: The oral metastasis was the first sign of systemic recurrence. Shortly afterwards, CT and MR imaging showed widespread dissemination with secondary lesions in the lungs, liver, spine, and multiple bones. Following the first chemotherapy cycle, partial regression of the oral lesion was observed, providing temporary symptomatic relief. However, due to deterioration in general condition, further systemic treatment was halted. Despite palliative chemotherapy and radiotherapy, the disease progressed, and the patient passed away in December 2023. Conclusions: Although rare, oral metastases of bladder carcinoma deserve attention, particularly in patients with a known oncological history. This case highlights the importance of considering metastasis in the differential diagnosis of rapidly developing oral lesions. What seems like a small oral lesion may actually signal advanced systemic disease. For this reason, early recognition and biopsy are crucial. This case also underlines the role of oral and maxillofacial surgeons in the multidisciplinary care of oncological patients, not only in diagnosing such uncommon presentations but also in guiding further treatment and palliative care.

Key words: Urinary bladder neoplasms; Carcinoma, Transitional cell; Mouth neoplasm; Neoplasm metastasis

R21 MESENCHYMAL STEM CELL THERAPY FOR TREATMENT OF OSTEORADIONECROSIS OF MANDIBLE- CASE REPORT

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Introduction: The treatment of osteoradionecrosis represents an important aspect of therapy in patients treated for head and neck cancer. Various therapeutic methods have been explored, and one of the promising options is BMAC (Bone marrow aspirate concentrate). Specifically, mesenchymal stem cell therapy which provides local tissues with growth factors and proliferative cells that can aid irradiated tissue in the healing process. Materials and methods: We present the case of a 50-year-old patient who, as part of treatment of an oncological disease in 2019, underwent chemoradiotherapy, during which a total dose of 70 Gy was administered over 35 fractions. As a consequence, in 2021, the

patient was referred to an oral surgeon with developed osteonecrosis of the mandible. Following the diagnosis, the patient underwent a total of 40 hyperbaric oxygen therapy sessions. Despite the treatment, no radiological or clinical improvement was observed. Therefore, in June 2023, we opted for bone marrow aspirate concentrate (mesenchymal and hematopoietic stem cells) from the tibia into the irradiated mandibular bone. Under general endotracheal anesthesia, after obtaining a sample for histopathological analysis, the exposed bone was covered with collagen sponges as carriers of mesenchymal stem cells. The flap was sutured, and the remaining stem cell concentrate was injected intraosseously using a needle. The procedure was completed without complications, and the patient was discharged from the hospital after a few days. Results: The patient was followed up clinically and radiologically, over a period of two years. Subjectively, the patient reported no symptoms, and radiological analysis confirmed significant regeneration of the mandibular bone tissue. Conclusions: The described method represents a significant advancement in the treatment of mandibular osteonecrosis and, as such, is applied by indication at the Department of Maxillofacial Surgery, University Hospital Center Split.
Key words: Osteoradionecrosis; BMAC; BMA; Mesenchymal stem cells

Posters presentations

P1 CENTRAL GIANT CELL GRANULOMA OF THE MANDIBLE AS THE FIRST MANIFESTATION OF PRIMARY HYPERPARATHYROIDISM: A CASE REPORT

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Introduction: Primary hyperparathyroidism is most commonly caused by a solitary adenoma, while rarely results from multiple adenomas, hyperplasia, or carcinoma. It leads to uncontrolled secretion of parathyroid hormone, with consequent hypercalcemia, hypophosphatemia, and elevated alkaline phosphatase levels. Long-standing disease causes skeletal changes, including jaw involvement, which presents as pseudocystic or pseudotumorous lesions, known as „brown tumors ". These are endocrine induced central giant cell granulomas, clinically, histologically, and radiologically indistinguishable from those of traumatic etiology. Materials and methods: A 36-year-old female patient, in the sixth month of pregnancy, was referred to the Department of Maxillofacial and Oral Surgery due to a tumorous lesion in the right mandibular region. Clinical examination revealed asymmetric enlargement of the mandible with bone deformity. The lesion was surgically excised, and histopathological findings confirmed a central giant cell granuloma. During pregnancy, the patient reported bilateral lumbar pain, interpreted as lumbosciatica. Two weeks postpartum, hip pain developed. Radiological assessment revealed pathological fractures and multiple osteolytic lesions, initially raising suspicion of metastatic disease. Laboratory findings showed elevated calcium levels. Further analysis revealed increased parathyroid hormone and alkaline phosphatase levels, while phosphate values were normal. Densitometry confirmed osteoporosis. Results: The findings indicated a metabolic bone disease associated with hyperparathyroidism and the development of a "brown tumor". Neck ultrasound revealed a nodular lesion of the lower left parathyroid gland measuring 5 centimeters, and aspiration confirmed the diagnosis of a parathyroid adenoma. Surgical excision of the adenoma was performed, after which postoperative parathyroid hormone and calcium values normalized. Conclusions: This case demonstrates that central giant cell granuloma, or "brown tumor", may present as the first manifestation of primary hyperparathyroidism. Laboratory findings of hypercalcemia, elevated parathyroid hormone, and alkaline phosphatase are crucial in differentiating these lesions from giant cell lesions of other etiologies. Interdisciplinary collaboration between oral surgeons and endocrinologists is essential for accurate diagnosis and successful treatment.
Key words: Giant cell granuloma; Primary hyperparathyroidism; Parathyroid adenoma

P2 BUCCAL BIFURCATION CYST IN THE MANDIBLE OF A CHILD: A CASE REPORT WITH THREE-YEAR FOLLOW-UP

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Introduction: The buccal bifurcation cyst is a rare inflammatory odontogenic cyst that most commonly affects children and adolescents. It is characteristically located on the buccal and distal aspects of the first permanent mandibular molar. Although etiopathogenesis remains a subject of debate, contemporary literature often attributes it to inflammatory processes within the periodontal pocket, with a histological finding identical to that of a radicular cyst. The clinical picture typically includes a painless buccal swelling, along with the displacement and lingual tipping of the tooth. In addition to conventional two-dimensional radiographic examinations, the use of CBCT (cone-beam computed tomography) is now essential for accurate diagnosis and treatment planning. The primary treatment is surgical and involves cystectomy with the preservation of permanent teeth. This paper presents a case of a buccal bifurcation cyst in a child, detailing the cystectomy performed with the extraction of deciduous molars and preservation of the germ of the second permanent premolar, along with a three-year postoperative follow-up. Materials and methods: A 9-year-old patient presented to the Department of Oral Surgery at the University Hospital Centre Zagreb due to swelling in the left mandible. A CBCT analysis revealed a well-defined lesion that was displacing the germ of tooth 35 and the mandibular canal lingually. Under general endotracheal anesthesia, the lesion was enucleated, teeth 74 and 75 were extracted, and the bony defect was contoured. The germ of tooth 35 was successfully preserved. Results:The histopathological analysis confirmed the provisional clinical diagnosis of an inflamed odontogenic cyst. Postoperative follow-up over a period of three years showed complete clinical and radiological healing with the normal eruption of permanent teeth. Conclusions: The successful enucleation of the cyst with the preservation of permanent teeth confirms the effectiveness of a conservative surgical approach, as supported by the long-term patient follow-up. CBCT diagnostics are crucial for precise surgical planning.
Key words: Odontogenic cysts; Cystectomy; Pediatric dentistry

P3 DOES TREATMENT OF METASTATIC BREAST CANCER IN MANDIBLE INFLUENCE MRONJ DEVELOPMENT? A CASE REPORT AND DIAGNOSTIC DILEMMA

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Introduction: Medication-related osteonecrosis of the jaw (MRONJ) represents a severe adverse drug reaction characterized by exposed necrotic bone in the maxillofacial region persisting over eight weeks without prior head and neck radiation. Incidence ranges from 0.01–0.03% in osteoporosis patients to 2–5% in cancer patients, reaching 11.6% with high-dose antiresorptive therapy. MRONJ primarily affects patients receiving bisphosphonates or denosumab for osteoporosis, oncology patients with bone metastases, and hypercalcemia management. The pathophysiology involves impaired bone remodelling, compromised vascular supply, altered immune responses, and disrupted wound healing, with the mandible predominantly affected due to higher bone turnover rates.Materials and methods: We present a retrospective case report of a 69-year-old female patient with breast carcinoma and bone metastases who developed MRONJ. The patient had mandibular metastasis treated with head and neck radiotherapy. One year after completing radiotherapy, she developed submental abscess, and following treatment and tooth extraction, developed MRONJ. She had been receiving antiresorptive therapy for several years. Patient data was collected from medical records, including clinical presentation, imaging studies, treatment protocols, and surgical outcomes. The case was managed according to established AAOMS guidelines for MRONJ treatment. Results: The patient underwent tooth extraction (31-34) in January 2023 for submental abscess while receiving antiresorptive therapy. Several months post-extraction, she developed mandibular fistula secondary to MRONJ. Conservative management failed, necessitating surgical intervention including sequestrectomy of the mandible (36-44), fistula excision, and reconstruction with local rotational flap. Post-operative recovery was satisfactory with successful wound healing and fistula resolution. Conclusions: This case demonstrates the challenging nature of MRONJ in oncology patients receiving high-dose antiresorptive therapy. The case specificity raises questions about the influence of mandibular metastasis treatment on MRONJ development and categorization issues, as AAOMS guidelines exclude MRONJ diagnosis when head and neck radiotherapy is present.
Key words: Drug-related osteonecrosis; MRONJ; Maxillofacial region; Lower jaw; Complications

P4 SURGICAL MANAGEMENT OF AMELOBLASTIC FIBRO-ODONTOMA IN THE MAXILLARY ANTERIOR REGION: A CASE REPORT

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Introduction: Ameloblastic fibro-odontoma is a rare, benign mixed odontogenic tumor that primarily affects the first two decades of life. Although its etiopathogenesis remains unclear, it is believed to originate from the same embryonic tissues as teeth, with the potential for differentiation into odontoblastic and ameloblastic cells. Clinically, it often presents as a slowly growing, asymptomatic, and painless swelling that can cause tooth displacement. Diagnosis is established through a combination of clinical examination and radiological findings, with ameloblastic fibro-odontoma typically appearing on radiographs as a mixed radiolucent and radio-opaque lesion. Due to its nature and risk of recurrence, the treatment of choice is conservative surgical enucleation. This paper reports a case of a rare AFO in the anterior maxilla of a child, describing the successful surgical management and postoperative follow-up. Materials and methods: A 7-year-old girl presented to the Department of Oral Surgery at the University Hospital Centre Zagreb due to swelling on the buccal aspect of the maxilla in the region of tooth 22. A CBCT (cone-beam computed tomography) scan revealed a tumor-like mass measuring 1.6 x 0.9 cm. Under general anesthesia, the lesion was completely enucleated, and the specimen was sent for histopathological analysis. Results:The histopathological report confirmed the diagnosis of ameloblastic fibro-odontoma, with characteristic clusters of dentin and cementum within the connective tissue sample lined by odontogenic epithelium. The postoperative course was clinically uneventful, with visible bone healing on follow-up orthopantomograms. Conclusions: This case is notable for the rare occurrence of the tumor in the maxillary anterior region. The uneventful clinical course and postoperative bone healing demonstrate the efficacy of surgical intervention and the importance of timely diagnosis.
Key words: Odontogenic tumor; Ameloblastic fibroodontoma; Pediatric dentistry

P5 IMPORTANCE OF DIFFERENTIAL DIAGNOSIS AND INTERDISCIPLINARY MANAGEMENT: A RARE CASE OF MANDIBULAR DEEP FIBROUS HISTIOCYTOMA

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Introduction: Deep fibrous histiocytoma (DFH) is a rare benign fibrohistocytic tumor most commonly present in the subcutaneous or deep soft tissues. Its occurrence in the mandible is extremely rare. Despite its benign nature, it shows approximately 20 % recurrence rate. The aim of this case report was to present a rare case of mandibular DFH. Materials and methods: A 56-year-old female presented to the Department of Oral Surgery, KBC Rijeka sent by a dentist for apicoectomy and cystectomy. An asymptomatic radiolucency lesion was an incidental finding on dental X-ray. A CBCT (Cone beam computed tomography) showed a well-defined periapical unilocular radiolucency on teeth 32 and 33. Treatment consisted of surgical enucleation of the lesion which was sent for histological examination. Results: Histology revealed a non-encapsulated spindle-cell lesion without mitotic activity. Immunohistochemically, spindle cells were positive for vimentin, and CD68- positive histiocytes were sparse. Markers STAT6, CD34, SMA, desmin, S-100, and MDM2 were negative, excluding other differential diagnoses. A diagnosis of DFH was made. Conclusions: Given the rarity of DFH in the mandible and its radiological similarity to other radiolucencies, accurate diagnosis relies on detailed histological and immunohistochemical assessment. This case contributes to the limited knowledge on mandibular DFH.
Key words: Fibrous histiocytoma ; Immunohistochemistry ; Mandible ; Oral surgery

P6 LARYNGEAL CHONDROSARCOMA – A CASE REPORT

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Introduction: Laryngeal chondrosarcoma is an extremely rare non-epithelial tumor, accounting for approximately 0.2% of all laryngeal malignancies. Its etiology is not fully elucidated. It is assumed to arise from disorganized ossification of the laryngeal cartilage. The most common clinical manifestations include respiratory difficulties, hoarseness, and dysphagia. Due to its non-specific symptoms and slow growth, the diagnosis is often established at an advanced stage. Metastases are rare, while the tumor exhibits locally invasive behavior. Materials and methods: A 45-year-old man presented with progressive dyspnea and hoarseness of two months' duration. Indirect laryngoscopy and fiberendoscopy revealed a 1×1 cm subglottic mass. Due to airway obstruction, a tracheotomy was performed, followed by a biopsy of the subglottic tumor. Histopathological analysis confirmed a diagnosis of chondrosarcoma. Neck computed tomography demonstrated an expansive lesion measuring 30×26×27 mm, with destruction of the right half of the cricoid cartilage, the right arytenoid, and the inferior margin of the thyroid cartilage. Results: A total laryngectomy, partial pharyngectomy, and right thyroid lobectomy were performed, followed by reconstruction of the neohypopharynx and formation of a tracheostomy. Histopathological examination confirmed a grade 1 chondrosarcoma according to the Fédération Nationale des Centres de Lutte Contre le Cancer (FNCLCC) classification, measuring 2.5×2.5 cm with 15% necrosis. The tumor margins were close (<1 mm), and therefore postoperative adjuvant radiotherapy was administered (60 Gy in 30 fractions). No recurrence was observed during the two-year follow-up. The neohypopharynx demonstrated normal morphology. Conclusions: Although rare, laryngeal chondrosarcoma should be considered in the differential diagnosis of subglottic tumors. Surgical resection remains the primary treatment option for laryngeal sarcomas, with adjuvant oncological therapy reserved for positive or close tumor margins. Long-term follow-up is crucial due to the risk of late recurrence. A coordinated multidisciplinary approach ensures optimal oncological control while preserving function and quality of life.
Key words: Chondrosarcoma; Laryngeal neoplasms; Laryngectomy; Patient care team; Radiotherapy

P7 MALIGNANCIES OF THE JAWS CLINICALLY MIMICKING ODONTOGENIC PATHOLOGY: CASE SERIES

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Introduction: Malignant tumors of the jaws may present with clinical and radiographic features closely resembling odontogenic lesions, leading to potential diagnostic challenges and treatment delays. Distinguishing between odontogenic pathology and malignant disease is essential to ensure timely and adequate therapy. Materials and methods: We present a case series of three patients whose initial clinical manifestations strongly suggested odontogenic pathology. Each case was investigated using standard diagnostic procedures, including radiographic imaging and histopathological examination. The clinical course, diagnostic challenges, and final treatment approaches were analyzed. Results: In all three cases, the initial presentation—such as localized swelling, pain, tooth mobility, and periapical or cyst-like radiolucencies—was highly indicative of odontogenic disease. However, further diagnostic evaluation ultimately revealed malignant pathology, including squamous cell carcinoma and osteosarcoma. This discrepancy between the clinical appearance and definitive diagnosis highlighted the risk of misinterpretation when relying solely on clinical and radiographic findings. Conclusions: Malignancies of the jaw may closely mimic odontogenic pathology, underscoring the importance of a thorough differential diagnosis in cases with atypical clinical courses or incongruent radiographic features. Histopathological confirmation remains the cornerstone for establishing the final diagnosis. Early recognition of malignancy is critical for improving prognosis and optimizing treatment outcomes. This case series emphasizes the need for vigilance and a multidisciplinary approach when evaluating jaw lesions that appear odontogenic in nature.
Key words: Jaw malignancy; Odontogenic pathology; Differential diagnosis; Osteosarcoma; Histopathological analysis

P8 AUTOIMMUNE POLYENDOCRINE SYNDROME TYPE 1 (APS-1) AND ORAL CAVITY CARCINOMAS – FIRST CROATIAN CASES AND CLINICAL IMPLICATIONS

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Introduction: Autoimmune Polyendocrine Syndrome Type 1 (APS-1, APECED) is a rare monogenic disorder caused by mutations in the AIRE gene. It is classically defined by the triad of chronic mucocutaneous candidiasis, hypoparathyroidism, and adrenal insufficiency. Beyond autoimmune manifestations, increasing evidence indicates that APS-1 patients carry a substantially elevated risk of squamous cell carcinoma (SCC), particularly in the oral cavity and esophagus. Compared with sporadic head and neck SCC, these cancers occur decades earlier, often in individuals without tobacco or alcohol exposure. Materials and methods: National registries from Finland and Italy report a lifetime risk of ~10% for head and neck malignancies in APS-1, with a median cancer onset at 35 years. Pathogenetically, impaired Th17 immunity with neutralizing IL-17/IL-22 autoantibodies, autoantibodies against type I interferons, and persistent Candida albicans colonization synergistically create a carcinogenic microenvironment. This leads to chronic inflammation, mutagenic by-products such as acetaldehyde, and activation of oncogenic pathways (EGFR/MAPK), culminating in "field cancerization." Results: We present the first two Croatian APS-1 patients who developed oral cancer before the age of 50: one male and one female, both without classical risk factors. During follow-up, both experienced multiple recurrences and second primary tumors within the oral cavity, highlighting the aggressive course and lifelong cancer susceptibility. Conclusions: These cases emphasize the need for early detection and lifelong surveillance of oral malignancies in APS-1. They also illustrate APS-1 as a unique human model demonstrating how autoimmunity and chronic fungal infection jointly drive early and aggressive carcinogenesis.
Key words: APS-1; Oral squamous cell carcinoma; Autoimmunity

P9 SURGICAL AND CETUXIMAB-BASED MANAGEMENT OF RECURRENT OROPHARYNGEAL SQUAMOUS CELL CARCINOMA IN THE ELDERLY

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Introduction: Squamous cell carcinoma of the pharynx is a malignant head and neck tumor, frequently associated with smoking and infection with Human Papillomavirus (HPV). Treatment requires a multidisciplinary approach, but options are limited in elderly patients. For those ineligible for chemoradiotherapy, radiotherapy with cetuximab is a viable option. We present a case of an elderly patient with locally advanced recurrence treated this way.
Materials and methods: A 77-year-old male was admitted in February 2020 to the Otorhinolaryngology clinic, University Hospital Centre Osijek, due to dysphagia, dyspnea, and significant weight loss (15 kg). Computed Tomography (CT) imaging revealed an expansive mass occupying the right side of the oropharynx and hypopharynx. Biopsy confirmed a moderately differentiated squamous cell carcinoma. Subsequently, the patient underwent total laryngectomy with partial pharyngectomy, radical neck dissection, right lobectomy of the thyroid gland, and tracheostomy formation. Results: Histopathological analysis confirmed squamous cell carcinoma of the right oropharynx, stage pT3N()MX, Combined Positive Score (CPS) 6.67. Postoperatively, adjuvant oncological treatment and radiotherapy were recommended, but the patient declined. In May 2024, disease recurrence was detected. CT scan of the neck revealed an expansive lesion measuring 3 × 4.2 × 4 cm, reducing the oropharyngeal lumen and infiltrating adjacent lymph nodes. Cytological aspiration confirmed metastatic squamous cell carcinoma. The patient was deemed inoperable, and due to advanced age and comorbidities, standard chemoradiotherapy was not indicated. Therefore, combined radiotherapy with cetuximab was initiated. Immunohistochemical analysis confirmed HPV positivity in up to 40% of tumor cells. Due to partial regression, treatment continued with the extreme protocol and weekly cetuximab maintenance. Conclusions: The determined CPS score of 6.67 represents a potentially significant criterion in the evaluation of further lines of immunotherapy in the event of disease progression. In clinical practice, treatment must be individualized, taking into account tumor stage, patient preferences, current guidelines, and the recommendation of the multidisciplinary team.
Key words: Squamous cell carcinoma; Cetuximab; Immunotherapy

P10 A COGNITIVE- BEHAVIOR THERAPY (CBT) FOR SURGICAL TREATED PATIENT WITH EXTENSIVE SQUAMOUS CELL CARCINOMAS IN THE MAXILLOFACIAL REGION: A CASE STUDY

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Introduction: Anxiety is relatively common amongst cancer patients undergoing maxillofacial Radiotherapy (RT), in part due to the immobilization procedure. We presented a case of 64-year old patient with clinically advanced squamous cell carcinomas in the facial region (stage IV), with secondary metastases, surgically treated at the Department of Maxillofacial Surgery, Clinical Hospital, Stip and referred to the Clinic of Oncology for further treatment. The main aim is through a case study to demonstrate advantages of a timely CBT intervention for RT–related anxiety and panic, and to offer facilitated access to RT treatment for a patient with cancer. Materials and methods: At the beginning of the CBT treatment, during the case formulation we noted high level of anxiety and patient's panic symptoms. When the patient thought about choking during RT his "fight-flight" response was activated. After psychoeducation we provided graduating exposure therapy based on his fear hierarchy, interventions for anxiety treatment, behavioral interventions and cognitive restructuring. Results: After attending 8 CBT psychotherapy appointments over a 4-week period, patient`s Hamilton anxiety and depression scale score reduced from 18 to 6 on the anxiety subscale and from 12 to 5 on the depression subscale. At 4-week follow-up, he reported his catastrophic choking beliefs had significantly reduced. He had completed all RT treatments with no significant anxiety problems. Conclusions: This case study describes the use of CBT to manage physiological symptoms and challenge catastrophic thinking to increase the patient's adherence to RT and to improve patient`s well being. It signifies that equipping a patient with psychological skills at the start of medical treatment can enable them to be more engaged. Additionally, it shows the importance of psychological and psychotherapy support in treatment of cancers.
Key words: CBCT; Clinically advanced; Squamous cell carcinomas; Maxillofacial region

P11 THERAPY OF PATIENTS WITH CLEFT LIP AND PALATE – AN INTERDISCIPLINARY APPROACH

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Introduction: Cleft lip and palate (CLP) represent a significant functional and aesthetic challenge, with treatment approaches varying from patient to patient. A multidisciplinary approach, with surgery as the initial phase, ensures optimal functional and aesthetic outcomes. The aim of this case is to present the orthodontic and prosthodontic treatment of a patient with bilateral CLP. Materials and methods: An 11-year-old patient was referred to the Dental Clinic Zagreb, Department of Orthodontics, with a diagnosis of bilateral CLP, skeletal Class III, hypodontia of both maxillary lateral incisors, and bilateral crossbite. Due to poor oral hygiene and untreated carious lesions, the patient was first referred for dental restoration and extractions. Following dental treatment and complete diagnostics, therapy was initiated with functional orthodontic appliance. Surgical intervention included osteoplasty of the maxilla with autogenous bone grafting. Orthodontic treatment continued with slow maxillary expansion (SME) and placement of fixed appliances in both arches. During therapy, periodontal procedures were performed, including gingivectomy, frenectomy, and guided tissue regeneration (GTR) in the region of teeth 11 and 21, followed by orthognathic surgery – maxillary osteotomy. Results: After completion of orthodontic treatment and periodontal management, prosthodontic rehabilitation was carried out. The treatment plan included fixed metal-ceramic restorations in the region 14–13–11–21–23–24, ensuring long-term stability, function, and an aesthetically acceptable outcome. Conclusions: In patients with bilateral CLP, orthodontic therapy plays a key role in stabilizing the often mobile premaxillary segment. Following orthognathic surgery and establishment of skeletal stability, prosthodontic rehabilitation is the final stage of treatment. Its aim is to compensate for residual morphological and functional deficiencies while restoring aesthetic harmony and full oral function.
Key words: Cleft; Orthodontics; Prosthodontics

P12 PRESURGICAL INFANT ORTHOPEDICS FOR CLEFT LIP AND PALATE

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Introduction: Presurgical infant orthopedics have been in use in cleft care for some time. With correct use, they help narrow the cleft, bring the alveolar segments and soft tissues of the facial envelope to a better position, help with asymmetry of the nose and can also

help with feeding. Various appliances and protocols can be used to improve the anatomy of the cleft before the primary surgery. Materials and methods: The type of appliance is chosen based on cleft type and the anticipated compliance of the parents. There are different types of passive plates, nasoalveolar molding appliances and lip taping. The appliance is started as soon as possible, in the second or third week of life if the child can tolerate it. Regular adjustments and checkups ensure gradual alignment of anatomic structures. Parent education is key to maintain good hygiene and motivation for the checkups. Multidisciplinary cooperation of the cleft surgeon and orthodontist, as well as dedicated nurses, is mandatory.
Results: Clinical experience of many cleft centres shows that presurgical infant orthopedics provide several advantages: improved spatial relations of alveolar segments and orofacial soft tissues which enables a more precise lip reconstruction with less surgical tension, while the nasal retainer helps with symmetry and collumelar length, especially in bilateral cases. Many studies have shown greater parent satisfaction and better surgical results after using preoperative molding. Complications are very rare and limited to temporary local irritation of skin or mucosa.
Conclusions: Presurgical infant orthopedic appliances are a very important and useful addition to cleft lip and palate care, improving the conditions for surgical reconstruction and enabling better long-term results. When used in a structured, controlled way under supervision of an educated cleft team and with compliance of the family, they are a harmless and very efficient adjunct to comprehensive cleft care.
Key words: PSIO; Cleft; Lip-taping; Nasoalveolar molding; Presurgical cleft orthopedics

P13 MEDIAN CLEFT OF LOWER LIP AND JAW

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Introduction: Median mandibular cleft is a rare craniofacial anomaly characterized by a cleft of the lower lip and mandible, occasionally extending to the neck. First described by Couronne in 1819, MMC corresponds to Tessier's number "30" cleft. Its estimated incidence is 4–5 cases per 1,000,000 live births and results from failed fusion of the first branchial arches or incomplete mesodermal penetration at the midline. Materials and methods: A 32-year-old woman was referred at 25 weeks of gestation after ultrasound revealed a lower-lip cleft, without additional anomalies. The pregnancy was uneventful, and a male infant was delivered at term with normal weight and vitality. Clinical examination showed a normal upper lip and nose. The lower lip was split at the midline, and the tongue had a deep central furrow. The tongue tip was adherent to the cleft margins, and the mandible consisted of two mobile bony segments. At 7 months, a low-dose MSCT scan was performed for surgical planning. Results: At 12 months (80 cm, 10 kg), the patient underwent mandibular osteosynthesis with lower lip reconstruction. Nasotracheal intubation was performed. Incisions were made along both sides of the cleft, into the vestibule. The orbicularis oris muscle was dissected to expose the mandible. Minimal decortication was performed to prepare the bony margins before osteosynthesis. The tongue was released from the floor of the mouth, and the tip and floor were reconstructed. Conclusions: Management of Tessier 30 clefts remains challenging due to their rarity and heterogeneity. Early single-stage reconstruction in infancy may improve mandibular growth, function, and aesthetics, reducing repeated interventions. With fewer than 100 cases reported between 1996 and 2020, standardized protocols are lacking, highlighting the need for individualized, multidisciplinary care. Early diagnosis and timely repair are vital to restore function and appearance. Ongoing case reporting is crucial to guide surgical timing, airway management, and long-term outcomes.
Key words: Median mandibular cleft; Tessier 30; Lower lip

P14 DENTAL WORK-UP PROTOCOL OF CHRONIC KIDNEY DISEASE PATIENTS UNDERGOING RENAL TRANSPLANT SURGERY

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Introduction: Chronic kidney disease (CKD) is a progressive loss of renal function characterized by kidney damage or decrease in glomerular filtration rate below 60 mL/min/1.73 m2 present for 3 or more months. In oral cavity, it manifests through mucosal pallor, osteodystrophy, enamel hypoplasia and xerostomia. Treatment is aimed towards slowing the progression of the disease, and in terminal stages renal replacement therapy is required. Oral cavity presents a potential source of infection in renal transplant candidates, therefore it is necessary to establish a satisfactory oral hygiene and eliminate dental foci before the surgery. Infection may also occur as a result of immunosuppression in post-transplantation period. Materials and methods: A retrospective chart review of patients who underwent dental evaluation at the Dental Clinic of the University Clinical Hospital Centre Zagreb during years 2019.-2024. before kidney transplant surgery was performed. Dental work-up consisted of supra- and subgingival instrumentation, caries removal and endodontic treatment in symptomatic teeth, and extraction of teeth with questionable prognosis. Antibiotic treatment was administered if required. Demographic, medical and dental data were registered for each patient. Number of dental appointments and days required to obtain dental clearance for kidney transplant surgery was registered as well. Results: Seventy-four patients underwent dental evaluation at our clinic during studied period. Sixty-three suffered from end stage renal disease. Only 2 patients had symptomatic teeth. Supra- and subgingival instrumentation was performed in 29 patients, endodontic treatment in 7 patients, and extraction in 20 patients (54 teeth). Antibiotic prophylaxis was administered in 4 patients. Single complication in form of post-extraction hematoma was recorded. In 50 patients (67,6%) dental clearance was obtained after one appointment. Conclusions: Results of this retrospective study show that dental work-up of patients undergoing renal transplant surgery can be performed safely, without serious complications and in reasonable timeframe without delaying the transplantation.
Key words: Chronic kidney disease; Dental work-up; Renal transplant surgery; Extraction; Immunosupression

P15 HPV VACCINATION AND ITS ROLE IN IMPROVING ORAL HEALTH

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Introduction: Human papillomavirus (HPV) is the most common viral infection of the reproductive and oral tracts, with over 200 genotypes. High-risk types, especially HPV-16 and HPV-18, possess a proven oncogenic role in the development of precancerous lesions and carcinomas, including those in the head and neck region. The virus can be transmitted during asymptomatic infection, and due to the lack of specific treatment, prevention remains a cornerstone of disease control.Materials and methods: This abstract is based on recent epidemiological studies, official public health data, and systematic reviews. The focus is on the effectiveness of the nonavalent HPV vaccine in infection prevention, highlighting its strong humoral immune response and lasting protection. Additionally, the role of healthcare workers in education, implementation of preventive programs, and raising awareness of HPV risks and consequences in the head and neck area is highlighted. Results: Recent epidemiological data clearly demonstrate that vaccination significantly reduces the prevalence of high-risk HPV genotypes responsible for oropharyngeal, tonsillar, and base of tongue cancers. In Croatia, children and young people aged 9 to 25 of both sexes are targeted for vaccination with the nonavalent vaccine, with coverage steadily increasing. The vaccine exhibits high efficacy against HPV genotypes linked to over 70% of oropharyngeal cancers. The frequent occurrence of HPV-related head and neck tumors in younger populations further underscores the importance of vaccination in this particular age group. Studies also confirm health-economic benefits, including reduced treatment costs and improved quality of life. Conclusions: Systematic HPV vaccination is the most effective primary prevention against malignant and premalignant head and neck diseases. Healthcare providers, especially oral and maxillofacial surgeons, should take an active role in education and promoting vaccination. A multidisciplinary approach involving epidemiologists, school and public health physicians is crucial for reducing HPV-associated cancers and improving oral health nationally.
Key words: Health education; Human papillomavirus (HPV); Oral health; Oropharyngeal neoplasms; Vaccination

P16 COMPARISON OF ORAL HEALTH VALUES BETWEEN HEALTH AND NON-HEALTH STUDENTS AT THE UNIVERSITY OF OSIJEK

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Introduction: Oral health plays a crucial role in overall health and well-being, influencing not only physical but also social aspects of life. Understanding values and attitudes toward oral health among students is of great importance, as these factors affect their oral hygiene habits and long-term health outcomes. This study aims to compare oral health values between students enrolled in health-related and non-health-related study programs

at the University of Osijek. Materials and methods: A cross-sectional study was conducted including 331 participants, of whom 186 (56.2%) were students of health-related study programs and 145 (43.8%) were students of non-health-related programs. For the purpose of the study, a structured questionnaire was developed, consisting of general demographic and socio-economic questions as well as the Oral Health Values Scale – Croatian version (OHVS-CRO). Results: Students in health-related programs reported brushing their teeth three or more times daily more frequently (30.1% vs. 15.9%) and using dental floss more often (65.6% vs. 45.5%) compared to students in non-health-related programs (P < 0.001). The overall OHVS score was higher among health-related students (median = 42, IQR: 39–46) compared to their non-health counterparts (median = 40, IQR: 34–43), with a statistically significant difference (P < 0.001). Significantly higher values were also observed across all individual OHVS domains, including professional dental care (P = 0.001), esthetic integrity and tooth preservation (P = 0.002), as well as dental floss use (P < 0.001). Conclusions: The results confirm the hypothesis that students enrolled in health-related study programs demonstrate more developed attitudes, habits, and values related to oral health compared to students in non-health-related programs. These findings may contribute to the development of new educational and preventive programs targeting the wider student population, with the goal of enhancing awareness about the importance of oral hygiene.
Key words: Health Knowledge; Attitudes; Practice; Oral health; Oral Health Values Scale (OHVS)

P17 KNOWLEDGE OF DENTAL STUDENTS ON VITAMIN D AND RISKS OF EXCESSIVE SUN EXPOSURE

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Introduction: Vitamin D plays a crucial role in maintaining both general and oral health. Its deficiency is associated with various oral diseases, including dental caries, periodontal disease, and delayed healing of oral mucosal wounds. Given the rising prevalence of vitamin D deficiency, along with the risks of excessive UV exposure, it is important to assess the knowledge of future dental professionals on these topics. This study was conducted among final-year dental students with the aim of evaluating their understanding and identifying potential knowledge gaps, which could be addressed through targeted educational interventions. Materials and methods: The study included 60 students from the 4th, 5th, and 6th years of Dental Medicine programme at the University of Osijek. Participants completed an online questionnaire based on a literature review. Responses regarding knowledge of vitamin D, oral health, and sun exposure risks were analyzed. Data were processed using non-parametric statistical methods, with a significance level set at p<0.05. Results: Most participants demonstrated good knowledge of vitamin D, and 98% were aware of the association between excessive sun exposure and skin cancer risk. Female students showed significantly better knowledge of vitamin D (p = 0.03) and overall knowledge (p = 0.02) compared to male students, although they performed worse on questions related to excessive sun exposure risks (p = 0.004). No significant differences were found based on the year of study. Despite high awareness of the risks, only 27% of participants reported regular use of sunscreen, and just 8% correctly identified all oral consequences of UV radiation. Conclusions: Dental students demonstrated satisfactory knowledge of the role of vitamin D in oral health but limited awareness of the consequences of UV radiation. These results highlight the need for enhanced education on vitamin D deficiency prevention and safe sun exposure, enabling future dentists to effectively advise their patients on these important health issues.
Key words: Vitamin D; Knowledge; Students; Sun Exposure

P18 VITAMIN D AND ITS IMPACT ON BONE REGENERATION AND ORAL HEALTH

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Introduction: Vitamin D plays a crucial role in calcium and phosphate homeostasis, bone metabolism, and immune regulation. In oral surgery, optimal vitamin D status is particularly important, as it influences bone regeneration, osseointegration, and wound healing. Deficiency has been associated with delayed bone repair, increased risk of postoperative complications, and compromised oral health, including higher susceptibility to periodontal disease. Materials and methods: A structured literature review was performed using PubMed, Web of Science, and Scopus, covering the years 2005 to 2023. The search strategy combined relevant MeSH terms and keywords such as "vitamin D," "calcitriol," "25-hydroxyvitamin D," "bone regeneration," and "oral surgery." From 573 initially identified articles, 30 studies that specifically addressed vitamin D, bone metabolism, and oral health were included. Results: Vitamin D was shown to enhance osteoblast activity and regulate osteoclast function, thereby promoting balanced bone remodeling. Clinical and experimental studies demonstrated that sufficient vitamin D levels improve bone healing and implant osseointegration, while deficiency is linked to delayed wound repair and increased risk of implant failure. Additionally, vitamin D supports immune modulation, reducing pro-inflammatory cytokines and enhancing anti-inflammatory pathways, which may contribute to better surgical outcomes in oral and periodontal therapy. Conclusions: Vitamin D is essential for successful outcomes in oral surgery, particularly in procedures requiring bone regeneration and implant therapy. Its dual role in skeletal metabolism and immune regulation highlights the importance of maintaining adequate serum levels in surgical patients. Further well-designed clinical trials are needed to define optimal supplementation strategies for improving oral surgical success rates.
Key words: Vitamin D; Oral surgery; Bone regeneration; Dental implants

P19 PRESENTATION OF SEVERAL CASES OF FACIAL FISTULAS IN DIFFERENT LOCATIONS

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Introduction: Facial fistulas are one of the complications of inadequately treated odontogenic inflammation. Odontogenic inflammation as pyogenic inflammation is characterized by onset and progression in the acute phase. Untreated acute odontogenic inflammation progresses to the chronic phase of inflammation after spontaneous drainage and forms a fistula. Most commonly, an intraoral fistula forms in the projection of the apex or in the immediate vicinity of the affected tooth. In facial fistulas, extraoral fistulas can form under certain conditions due to the anatomical conditions defined by the relationship of the attachment points of the facial muscles and the relationship of the tip of the tooth root to the muscle-bone connection. Materials and methods: The problem with facial fistulas is that they are often not recognized or inadequately treated. As far as non-recognition is concerned, it can refer to non-dental professions, but unfortunately also to cases where facial fistulas are not recognized by dentists. The problem of inadequate treatment requires conservative procedures such as the application of various creams and ointments or dermatological treatments. Surgical procedures include excochleation of the fistula or plastic surgery of the fistula, which subsequently recurs because the causative tooth was not removed. Unfortunately, etiology of facial fistulas is often not recognized, and such patients are consequently inadequately treated by various specialists, including plastic surgeons, otolaryngologists, and dermatologists. Results: The aim of this paper is to present five cases of facial fistulas at different sites from our clinical practice, which remained unrecognized or inadequately treated for a long period, resulting in permanent consequences such as scarring and impaired facial aesthetics.Conclusions: In conclusion, although this is a well-known clinical entity, we emphasize its practical importance, since even today patients with facial fistulas often pass through various non-dental specialists and undergo inadequate treatment methods that differ little from descriptions in decades-old literature.
Key words: Facial fistula; Oral surgery; Odontogenic infection

P20 DIFFUSE NECK INFLAMMATION AS A COMPLICATION OF ODONTOGENIC INFECTION

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Introduction: Odontogenic infection most often manifests as an abscess, or a localized pyogenic process. Under certain circumstances, depending on the patient's general health, increased bacterial virulence, or inadequately treated odontogenic infection, instead of an abscess the condition may present as phlegmon, diffuse inflammation, or necrotizing fasciitis.
Materials and methods: The aim of this presentation is to describe a case of complicated odontogenic infection. The source of the infection was a carious tooth 37. In clinical practice, patients hospitalized for odontogenic infection usually have poor overall dental status. In contrast, the patient presented here had only one carious tooth (37), which nevertheless caused severe deterioration of his health. The patient was admitted to hospital in poor general condition with trismus, dehydration, pallor, clammy sweat, and elevated body temperature. Radiological diagnostics included an orthopantomogram, which identified tooth 37 as the source of the inflammation, and CT of the head and neck, which demonstrated inflammatory changes in the oral cavity soft tissues, the left masticatory, parotid, and submandibular spaces, the left parapharyngeal and retropharyngeal spaces, with infiltration of the subcutaneous fat of the neck extending to the sternoclavicular joints. Laboratory findings showed elevated leukocytes, ESR, and CRP, confirming an

active inflammatory process. Results: Following bronchoscope-guided intubation due to trismus, the patient underwent surgical treatment that included extraction of the causative tooth, intraoral incision with drainage, and multiple extraoral incisions with drains placed in the affected neck regions. After surgery, the patient's condition improved, as confirmed by laboratory results, and he was discharged for home treatment. Conclusions: In conclusion, it is important to emphasize that the treatment of complicated odontogenic infection requires the use of all diagnostic and surgical procedures recommended in clinical practice in order to prevent even more serious complications, such as mediastinitis or sepsis, which can be life-threatening.

Key words; Neck phlegmon; Odontogenic infection; Oral surgery

P21 HYALURONIC FILLER MISAPPLICATION LED TO A CHRONIC MAXILLARY SINUSITIS – CASE REPORT

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Introduction: Chronic maxillary sinusitis is commonly associated with dental pathology, allergic factors, or anatomical abnormalities, while cases caused by foreign bodies remain uncommon. This report presents an unusual instance of chronic maxillary sinusitis arising from the misplacement of hyaluronic acid filler following a cosmetic facial procedure. Materials and methods: A 60-year-old female developed persistent right-sided maxillary sinusitis symptoms over a three-year period following hyaluronic filler injections. Multi-slice computed tomography revealed complete opacification of the affected sinus, the presence of a vermiform foreign body, and a small perforation in the anterior wall. The patient was treated with a Caldwell-Luc procedure, during which the foreign body was extracted and the sinus mucosa excised, with subsequent histopathological evaluation performed. Results: The operation was successful, achieving full removal of the foreign body, which was identified as hyaluronic filler. The patient's postoperative course was uncomplicated, with complete resolution of symptoms. This uncommon complication was according to the histopathological report most likely due to inadvertent penetration of filler material into the maxillary sinus during injection.

Conclusions:This represents the first reported case of chronic maxillary sinusitis resulting from hyaluronic filler misplacement. It highlights the essential importance of preventing severe complications in facial aesthetic procedures through comprehensive anatomical knowledge, refined technical proficiency, and rigorous practitioner credentialing. Greater awareness and stronger regulatory measures may further enhance patient safety.

Key words: Chronic sinusitis; Hyaluronic filler; Complications

P22 MANAGEMENT OF EXTENSIVE PERIAPICAL LESIONS IN THE AESTHETIC ZONE USING A COMBINED THERAPEUTIC APPROACH: A CASE REPORT

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Introduction: The treatment of extensive periapical lesions represents a major clinical challenge, particularly in the aesthetically demanding region. The primary therapeutic approach begins with endodontic therapy, which, if necessary, may be followed by surgical intervention. In certain cases, endodontic and surgical procedures can be performed simultaneously, depending on the extent and characteristics of the lesion. Materials and methods: A patient presented with pain in the maxillary anterior region. Radiographic examination revealed extensive periapical lesions associated with teeth 12 and 22. A multidisciplinary treatment plan was designed. Tooth 22 was extracted and immediately replaced with a dental implant. Tooth 12 underwent endodontic therapy, combined with placement of a decompression tube by the oral surgeon. Treatment consisted of multiple-visit endodontic procedures with intracanal medication changes, while the patient performed irrigation through the tube. The period from initial decompression to definitive surgical intervention lasted 16 months and required a high degree of patient compliance. Following regression of the lesion, a minimal apicoectomy of tooth 12 was performed, and the bone defect was augmented using a combination of plasma rich in growth factors (PRGF) and a xenogeneic bone graft. Results: Six months after completion of therapy, radiographic examination confirmed healing in the region of tooth 12, without signs of recurrence. The implant placed at site 22 demonstrated successful osseointegration and functional stability.

Conclusions: This case report highlights the effectiveness of a combined therapeutic approach in the management of extensive periapical lesions, where endodontic, surgical, and implant therapy may complement one another depending on specific clinical circumstances. Multidisciplinary collaboration and active patient involvement proved essential for achieving a favorable treatment outcome.

Key words: Apicoectomy; Endodontic therapy; Periapical lesions

P23 MIGRATION OF AN IMPACTED MANDIBULAR THIRD MOLAR ASSOCIATED WITH IDIOPATHIC OSTEOSCLEROSIS: A RARE CASE REPORT

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Introduction: Idiopathic osteosclerosis is a non-expansile bone lesion of unknown etiology, mostly detected incidentally on dental radiographs. It is typically asymptomatic and does not require intervention. This case report presents a rare clinical presentation in which enlargement of the idiopathic osteosclerosis was associated with the progressive migration of an impacted mandibular third molar into close proximity with the inferior alveolar canal. Consequently, causing paresthesia of the lower lip and chin and requiring surgical intervention. Materials and methods: The treatment included surgical removal of the impacted tooth 48 and a bone biopsy of the sclerotic area to establish definitive diagnosis. Preoperative anesthesiologic evaluation was completed, and the procedure was performed uneventfully. Results:Histological examination of the bone biopsy confirmed the diagnosis of idiopathic osteosclerosis, revealing dense, mature lamellar bone without signs of inflammation or malignancy. No postoperative complications were observed. The patient reported no neurosensory disturbances after the surgery, and the inferior alveolar nerve was preserved without signs of paresthesia or dysesthesia. Healing proceeded normally, and no signs of infection were observed at follow-up. Conclusions: Although idiopathic osteosclerosis is usually of no clinical concern, this case demonstrates that, in rare instances, it may contribute to significant anatomical changes over time. Such cases underline the importance of long-term radiographic monitoring, especially when idiopathic osteosclerosis is detected near impacted teeth or vital anatomical structures. Early recognition of progression and timely intervention may help prevent complications and guide appropriate management. Additionally, when biopsy is indicated, histopathological analysis is essential to confirm the diagnosis and exclude other potentially serious conditions.

Key words: Idiopathic osteosclerosis; Impacted third molar; Tooth migration; Jaw pathology; Oral surgery

P24 ONE-STEP RIDGE AUGMENTATION USING FORM-STABLE MAGNESIUM MEMBRANE AND COLLAGEN MATRIX

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Introduction: Successful alveolar ridge reconstruction often requires not only bone regeneration but also augmentation of the surrounding soft tissues. Conventional techniques include separate procedures to achieve this, increasing morbidity and prolonging treatment time. This case-based study introduces a novel approach combining a form-stable magnesium membrane with an acellular dermal matrix for simultaneous hard and soft tissue regeneration.

Materials and methods: Three patients underwent guided bone regeneration in different clinical scenarios: (1) alveolar ridge preservation after tooth extraction, (2) immediate implant placement with simultaneous GBR, and (3) delayed implant placement after GBR in an edentulous patient. In all cases, a resorbable magnesium membrane (NOVAMag®, botiss GmbH) was used to stabilize the bone graft, while mucoderm® (botiss GmbH) was applied over the graft and membrane to augment and protect soft tissues. The surgical technique involved minimal fixation with titanium pins and was designed to reduce flap tension and promote vascularization. Histological and histomorphometric analysis was performed six months postoperatively in two cases. Results: Clinical healing was uneventful in all three cases, with adequate soft tissue volume and stable ridge contours. Histological evaluation showed new trabecular bone in direct contact with bone substitute material, without signs of inflammation. In one specimen, residual autogenous bone was also detected. Quantitative analysis demonstrated favorable tissue distribution: up to 45 % newly formed bone, 22 % residual graft, and 33 % connective tissue. The magnesium

membrane maintained space effectively and allowed for simplified handling with reduced need for fixation. Conclusions: This novel technique offers a promising alternative for simultaneous hard and soft tissue augmentation.
Key words: Guided bone regeneration; Magnesium membrane; Acellular dermal matrix; Ridge preservation

P25 SOFT TISSUE AUGMENTATION USING PADM AND RESORBABLE MAGNESIUM SCREWS

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Introduction:To achieve high esthetic and functional standards in dental implantology, soft tissue augmentation has become increasingly important. Although autologous connective tissue grafts (CTG) and free gingival grafts (FGG) remain the gold standard, their application is limited due to the need for a donor site, longer procedure time, and significant postoperative discomfort. Consequently, substitute materials of allogeneic, xenogeneic, or synthetic origin are being increasingly adopted. Porcine acellular dermal matrix (PADM) has shown high biocompatibility and excellent esthetic integration, but graft stabilization remains a clinical challenge. This case series presents, for the first time, the use of resorbable magnesium screws to stabilize PADM in peri-implant soft tissue augmentation. Materials and methods: Three clinical cases requiring soft tissue augmentation around dental implants are presented. In all cases, PADM was stabilized with resorbable magnesium screws (NOVAMag®). After elevation of a full-thickness flap, the graft was positioned and fixed buccally. Postoperative evaluation was performed after 3 to 6 months using intraoral scanning (STL analysis) and clinical measurements. Results: All patients demonstrated an increase in soft tissue volume and improved keratinization. The mean vertical gain was 0.87 ± 0.16 mm, and the mean horizontal gain was 1.00 ± 0.13 mm. Mucosal thickness increased from 1.0–1.2 mm to 1.9–2.1 mm, and the width of keratinized mucosa improved by an average of 1.0 mm. No complications were observed, and esthetic outcomes were satisfactory.Conclusions: The combination of PADM and resorbable magnesium screws is a minimally invasive and reliable technique for peri-implant soft tissue augmentation. It ensures stable graft integration, delivers consistent esthetic and volumetric improvements, and reduces the need for harvesting autologous tissue as well as the incidence of postoperative complications.
Key words: Soft tissue augmentation; Resorbable magnesium screws; Peri-implant soft tissue; Dental implantology

P26 TIO_2 NANOCOATINGS BY ATOMIC LAYER DEPOSITION STRENGTHEN PMMA BONE CEMENT: MECHANICAL REINFORCEMENT AND ANTIMICROBIAL PROTECTION

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Introduction:Titanium dioxide (TiO_2) is a biocompatible and photocatalytically active material increasingly used in biomedicine for antimicrobial and surface-enhancing applications. Atomic Layer Deposition (ALD) enables precise, uniform TiO_2 nanocoatings that improve surface wettability, strength, and antibacterial properties. In contrast, conventional polymethyl methacrylate (PMMA) bone cement although biocompatible and widely used in oral and maxillofacial surgery remains susceptible to microbial colonization and limited mechanical durability.Materials and methods: In the presented abstract paper materials and methods used included: PMMA preparation: Medical-grade PMMA bone cement (Cemex® Genta, Tecres S.p.A., Italy) cast into 5 × 5 × 2 mm plates, polished, ultrasonically cleaned, and nitrogen-dried.ALD coating: TiO_2 nanolayers deposited on PMMA using Beneq TFS 200 ALD system (PEALD + ozone); $TiCl_4$ and H_2O as precursors; thicknesses 30 nm and 100 nm.Surface analysis: FE-SEM (JEOL JSM-7800F PRIME, Japan) used to examine morphology and coating uniformity. Antibacterial testing: Evaluated against Pseudomonas aeruginosa and Staphylococcus aureus via OD_{600} planktonic growth and biofilm activity assays.Results: Planktonic Growth (OD_{600}): Optical density at 600 nm was measured to quantify bacterial growth of S. aureus and P. aeruginosa in suspension.Biofilm Formation (OD Ratio): Biofilm biomass was estimated by OD_{600} measurement after washing and resuspension; the biofilm/planktonic OD ratio indicates bacterial adhesion on tested surfaces.Conclusion:SEM analysis confirmed uniform TiO_2 coatings on PMMA, which significantly reduced S. aureus and P. aeruginosagrowth and biofilm formation. ALD-deposited TiO_2 layers enhance the antibacterial and surface performance of PMMA for biomedical use.
Key words: Titanium dioxide; PMMA bone cement; Atomic layer deposition; Oral surgery; Antimicrobial coatings

Nurses' Invited lectures

NI 1 THE CHALLENGE OF REPROCESSING HANDPIECES, GET IT RIGHT!

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Some products are more „challenging" to reprocess than others such as dental and surgical handpieces. They are complex to clean and to sterilize without adequate equipment and specific processes, indeed preferably validated processes. Evidently, handpieces, like any other instrument, must be pre-disinfected, cleaned, lubricated and sterilized between patients.We hear all your concerns: "I don't have enough time between patients" or "I don't have enough instruments to do it right" or "Sterilization will reduce the life span of my handpieces and lead to higher repair costs" and "it will be too costly to implement the right procedure" and, and...The lecture aims first put a figure on the microbial contamination of handpieces during treatments and then address all the doubts and concerns listed above whilst presenting different reprocessing options either manual and/or automated, which will help our participants find potential and satisfaction to improve and implement THE procedure which fits them best.
Key words: Sterilization; Handpieces; Procedure

NI 2 FROM PEDICURE TO PODIATRY

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In many developed countries, podiatry has been formally recognized as an academic healthcare discipline specializing in the management and treatment of pathological conditions of the foot. Historically, its origins can be traced to the evolution of dentistry. During the Middle Ages, the same practitioners frequently provided both foot care and dental interventions. In the 12th and 13th centuries, the so-called "bath attendants," proprietors of the then-established public bathhouses, offered a wide spectrum of services, including bathing, haircutting, shaving, tooth extraction, treatment of diseased feet, removal of warts, as well as minor surgical procedures—all performed under conditions that would be considered unacceptable by modern standards. Over time, dentistry and podiatry diverged and developed along markedly different trajectories. Dentistry evolved into a highly academicized and scientifically grounded medical discipline, whereas the treatment of foot disorders continues to be practiced at heterogeneous and often insufficiently standardized levels—ranging from craft-based cosmetic pedicure to specialized medical podiatry. This divergence raises crucial questions concerning professional standardization, regulation, and the future development of the field.
Key words: Podiatry; Pedicure;Dentistry

Nurses' Oral communications

N1 ORAL SURGICAL PROCEDURES UNDER GENERAL ANESTHESIA – THE ROLE OF THE NURSE AND DENTAL ASISTANT

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Introduction:Nurses and dental assistants are integral members of the oral surgery team and are routinely involved in a wide range of oral surgical procedures performed in dental clinics. Tooth extraction remains one of the most commonly performed procedures and is typically conducted under local anesthesia. However, more complex procedures—such as difficult extractions of impacted teeth, removal of large jaw cysts, and extensive jaw reconstructions following trauma or tumor surgery—often require the use of general anesthesia. Materials and methods: In such cases, the nurse and dental assistant play a crucial role in the surgical team, contributing to the preoperative preparation of the patient, intraoperative assistance, and postoperative care. The role of the scrub nurse during procedures under general anesthesia includes the preparation and maintenance of sterile surgical instruments, active intraoperative assistance by providing instruments, and ensuring the technical conditions necessary for a complication-free procedure. During procedures performed under local anesthesia, the dental assistant typically stands on the patient's left side, holds the cheek retractor to provide the surgeon with optimal access to the surgical site, and simultaneously operates the suction device to remove excess saliva, blood, and other fluids, thereby maintaining a clear operative field. Results: The development of

outpatient (day-case) surgery has facilitated patient access to oral surgical procedures performed under general anesthesia, improving both comfort and recovery outcomes. Nurses and dental assistants must possess specialized knowledge, manual skills, and technical competencies, including familiarity with surgical instruments, equipment, and materials. Their responsibilities also include monitoring the patient's general condition before, during, and after surgery, as well as delivering clear verbal and written postoperative instructions. Conclusions: Upon awakening from general anesthesia, patients are advised on necessary precautions and hygiene practices, particularly regarding oral hygiene and behavior until the removal of sutures.

Key words: Surgical assistance; General anesthesia; Preoperative preparation; Postoperative instructions

N2 PATIENT OPINION ON ORAL HEALTH

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Introduction: Oral health, as an integral part of general health, is an important factor in the overall quality of life. Although more and more investments are being made in preserving oral health in Croatia and around the world, oral diseases are increasing and represent a major public health problem. Materials and methods: In this study participants were the patients of the oral surgery clinic of the Department of Maxillofacial and Oral Surgery of Clinical Hospital Center Osijek. The study was conducted from April to May 2023. The data collection method used was based on the University of Hiroshima Survey Questionnaire - Dental Behavioral Inventory (HU-DBI) related to oral health of patients. Results: There wre 85 participants involved in the research, 42 (49%) of which were men and 43 (51%) were women. The largest number of participants, 24 (28%) of them belong to the age group of 18-30 years, followed by 18 (21%) participants aged 31-40 years, 15 (18%) participants belong to the age group 41-50 years, while 14 (16%) participants are aged 51-60 and 61 or over. Regarding the level of education, 50 (59 %) participants have completed secondary education, while 17 (20 %) participants have a university degree. 34 (40%) participants live in the city, while 51 (60%) participants live in the countryside. Conclusions: People over the age of 61, unlike other age groups, have worse oral health. Women have significantly better oral health than men. There is no significant difference in the sum of the HU-DBI questionnaire in relation to education and place of residence.

Key words:Patients; HU-DBI; Oral, Health

N3 PROFESSIONAL STRESS AND SLEEP QUALITY OF NURSES AND TECHNICIANS

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Introduction: The main task of a nurse is that he/she is at the patients\' disposal 24 hours a day. Working night shifts is related with sleep problems, where nurses compensate for lack of sleep during the day and thus alter the metabolism of the body. The aim of this study is to investigate whether there is a statistically significant difference in excessive sleepiness of nurses with regard to their place of work, working hours and exposure to work-related stress. The survey involved 87 subjects. The subjects were nurses who attend the Part-Time Graduate Study of Nursing in Rijeka, first and second year students. The sample was formed in two groups: nurses who work 8-hour morning shifts and, nurses who work 12-hour (day/night) shifts.Materials and methods: The research was done with a questionnaire that was created exclusively for the purpose of this research. The first part of the questionnaire refers to sociodemographic data, the second part of the questionnaire treated the issues of stressors and sleep disorders, and the third part of the questionnaire is Epworth Sleepiness Scale that measures daytime sleepiness in common daily activities. Results: The results show that there is no statistically significant difference in excessive daytime sleepiness of nurses who work 8-hour morning shifts compared to those who work 12-hour (day/night) shifts ($U = 801.00$, $p = 0.22$). Work-related stressors affect the sleep disorder of nurses. The type of department does not affect the excessive sleepiness of nurses ($\chi 2$ (SS) = 7.03 (5); $p = 0.22$)
Conclusions: The main stressors affecting sleep among nurses and medical technicians are shift work, on-call duties, and workload. Participants working under more demanding conditions reported higher levels of daytime sleepiness. No significant differences were found between 8-hour and 12-hour shifts or workplaces, although sleepiness was most pronounced in hospital wards and clinics, and least in education.

Key words: Nurse; Sleep disorder; Shift work; Work-related stress

N4 MEDIASTINITIS - A COMPLICATION OF ODONTOGENIC INFECTION (A CASE REPORT)

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Introduction: Odontogenic infections are a common cause of hospitalization in maxillofacial surgery. They are often caused by dental complications and present with symptoms such as swelling, pain, redness, trismus and lymphadenopathy. Mediastinitis is a rare, but serious complication of a purulent dental infection, resulting from the spread of the infection from the oral cavity and neck into the thoracic cavity. Materials and methods: A 54-year-old diabetic male presented with swelling of the right side of the face and neck, progressively increasing over 7 days and accompanied by dysphagia. Clinical examination and radiological methods revealed necrotizing fasciitis of the neck and mediastinitis. Intravenous antibiotic therapy was administered. As part of the treatment, multiple incisions and drainages of the neck, thoracotomy, re-thoracotomy and tracheotomy were performed, followed subsequently by necrectomy. During hospitalization, the nurses monitored the patient's vital functions and general condition, prepared the patient for surgeries, performed wound dressing, monitored drainage, provided tracheostomy care and administered therapy. Nutrition was initially provided through a nasogastric tube and later through PEG. Results: After two months, the patient was discharged afebrile and stable, requiring community nursing care. Multiple tooth extractions were subsequently performed because of the patient's poor dental status. Follow-up radiological imaging confirmed scarring of both lungs with adhesions and epiglottic paresis. Conclusions: This case report emphasizes the importance of early diagnosis, surgical intervention and antibiotic therapy in the treatment of mediastinitis. Advanced stages of mediastinitis are characterized by high mortality rates and respiratory insufficiency. The role of the nurse within the multidisciplinary team is particularly emphasized, including monitoring the patient's general condition and vital functions, planning and implementing nursing care and therapeutic procedures, preventing complications and providing support to patients and their families.

Key words: Odontogenic Infection; Mediastinitis; Surgical Treatment; Nursing Care

N5 NURSING CARE FOR PATIENTS WITH JAW FRACTURE AND INTERMAXILLARY FIXATION – CHALLENGES IN NUTRITION AND ORAL HYGIENE

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Introduction: Fractures of the jaw represent a significant clinical challenge and, in many aspects including treatment and postoperative patient care differ from other types of fractures. The jaw, as an anatomical structure located at the beginning of the digestive and respiratory systems, plays an essential role in mastication and swallowing. Any injury or therapeutic procedure inevitably leads to disturbances of these functions, while simultaneously making the maintenance of oral hygiene considerably more difficult. The standard therapeutic approach in the management of jaw fractures involves intermaxillary fixation, which, restricts mouth opening and prevents normal food intake. In patients with intermaxillary fixation, nutrition is limited to liquid preparations, which must be nutritionally optimized to meet the increased metabolic demands of the body during bone healing. The nurse plays a important role in nutritional care by educating patients while simultaneously conducting continuous monitoring and timely interventions in case of difficulties. Intermaxillary fixation also significantly compromises the ability to maintain oral hygiene due to the restrictions imposed on conventional tooth-brushing methods. Therefore, nursing care includes patient education on the appropriate use of antiseptic solutions, soft toothbrushes, and supplementary oral hygiene aids, thereby reducing the risk of infections, halitosis, and periodontal complications.
Conclusions: Nursing care for patients with jaw fractures and intermaxillary fixation requires multidisciplinary and individually tailored approach, in which nutritional support and the maintenance of oral hygiene occupy a central place. Timely and structured education, continuous evaluation of health status, and the provision of comprehensive support are key determinants of successful rehabilitation. In this way, nursing care not only reduces the risk of complications and improves treatment outcomes but also contributes significantly to the preservation of functional capacity and the overall quality of life of the patient.

Key words: Jaw fracture; Intermaxillary fixation; Nutrition; Oral hygiene

N6 MANDIBULAR FRACTURE, TREATMENT AND POSTOPERATIVE CARE

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Introduction: Mandible (lat. mandible) is the strongest, unpaired and only mobile bone of the face. Mandibular fractures are complex injuries of the orofacial region whose successful treatment requires the integration of surgical procedures with postoperative monitoring, with special emphasis on oral hygiene and nutrition. The clinical picture includes occlusion dislocation, pathological fragment mobility, edema and pain. The diagnosis is based on clinical examination and radiological methods, primarily orthopantomogram (OPG) and high-resolution computed tomography (CT). Treatment of fractures depends on the localization and character of the fracture. Treatment can be conservative: with a liquid diet or immobilization with intermaxillary fixation (IMF). Mandibular fractures are more often treated surgically: with open reduction and stable osteosynthesis with miniplates and screws, which allows anatomical repositioning of the fragment and early mobilization. Immediately after surgery, oral hygiene becomes imperative to prevent wound infections and the development of osteomyelitis. The protocol includes the use of antiseptic rinses with chlorhexidine preparations and brushing teeth with extremely soft toothbrushes. In parallel, nutritional support is crucial for bone healing. A soft/liquid diet rich in proteins, vitamins and minerals is required. The nutritional plan should include hyperprotein and hypercaloric mash meals and nutritional shakes to maintain homeostasis and stimulate bone tissue regeneration. In conclusion, the outcome of mandibular fracture treatment is directly proportional to an interdisciplinary approach where surgical intervention is only the beginning of the process, the success of which is determined by careful implementation of postoperative oral hygiene measures, proper nutrition and adequate antibiotic therapy. Patient education is an indispensable component of the entire therapeutic protocol.

Key words: Mandibular fracture; Treatment; Oral hygiene; Intramaxillary fixation; Nutritional support

N7 PREOPERATIVE PREPARATION AND POSTOPERATIVE MONITORING OF THE PATIENT WITH TRAUMATIC NASAL AMPUTATION

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Introduction: Traumatic injuries in the maxillofacial region are important due to their functional and aesthetic significance, making timely diagnosis and treatment essential. In these injuries, accurate assessment of anatomical relationships is crucial. Tissue defects of the eyelids, nose or lips must be reconstructed immediately. For partial or complete nasal skin defects, the method of choice is the forehead flap - a tissue graft with own blood supply, transferred from one part of the body to another. If a defect of the nasal cartilage is present, it can be replaced with rib cartilage. Nursing care includes admission, diagnostic procedures prescribed by the physician, preparation for surgery, postoperative care and education of the patient and family. When taking the nursing history, the nurse gathers information about medical history, allergies, previous surgeries, chronic illnesses, and medications. It is also important to collect information about the time and mechanism of injury, subjective complaints and conditions such as alcohol intoxication or drug use, since these may affect treatment. Preoperative preparation includes both physical and psychological preparation. Physical preparation involves therapy administration, assistance with personal hygiene (bathing and shaving), measurement of vital signs, and assessment of skin and mucous membranes. Psychological preparation consists of providing the patient with information about diagnostic and therapeutic procedures, as well as about the postoperative course. Postoperative monitoring involves observation of vital signs, administration of therapy, wound dressing and drainage monitoring, detection of complications, assistance with mobilization, emotional support and patient education. The nurse plays a key role in all stages of treatment – from preoperative preparation to postoperative care – providing safety and support. Comprehensive nursing care contributes to faster recovery and reduces the risk of complications.

Key words: Traumatic amputation of the nose; Frontal flap; Nursing care

N8 APPLICATION OF AUTOLOGOUS DENTIN GRAFT IN ORAL SURGERY: TASKS AND CHALLENGES OF THE NURSE

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Introduction: An autologous dentin graft obtained by grinding an extracted tooth represents a biologically compatible and predictable method for the regeneration of bone defects in oral surgery. Enrichment of dentin particles with plasma rich in growth factors (PRGF) further stimulates osteogenesis, healing, and graft integration. The nurse plays a crucial role throughout all phases of perioperative care. Materials and methods: The procedure of dentin graft preparation using the Smart Dentin Grinder device, enrichment with PRGF fraction II, and fabrication of a fibrin membrane from PRGF fraction I are described. Nursing tasks were analyzed, including preparation of surgical instruments and the operative field under aseptic conditions, surgical assistance, preparation of PRGF fractions, handling of the device, medical documentation, patient monitoring, and postoperative education. Results:The combination of dentin graft and PRGF technology proved to be a safe and effective method that promotes bone regeneration, accelerates healing, and reduces the risk of complications. Active involvement of the nurse was essential for the successful execution of the procedure and the quality of perioperative care. Conclusions: An autologous dentin graft combined with PRGF technology represents a reliable method for bone defect regeneration. Nursing expertise and patient education are critical determinants for achieving optimal therapeutic outcomes.

Key words: Autologous dentin graft; PRGF; Bone regeneration; Nursing tasks; Oral surgery

N9 TEN YEARS OF MICROVASCULAR HEAD AND NECK RECONSTRUCTIONS AT DUBRAVA UNIVERSITY HOSPITAL: OUR EXPERIENCE AND OUTCOMES

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Introduction: Free microvascular flaps are now the standard in head and neck reconstruction, ensuring high success rates and significant improvement in both functional and aesthetic outcomes. Nevertheless, complications remain a challenge and can influence recovery and final results. Materials and methods: A retrospective analysis was conducted of all patients operated on between 2012 and 2021 at the Department of Maxillofacial Surgery, Dubrava University Hospital. The study included patients who underwent head and neck reconstruction using free microvascular flaps. Epidemiological and clinical data, tumor localization, type of flap used, as well as perioperative outcomes and complications were analyzed. Results:The most commonly used flaps were the radial forearm flap, fibular flap, and anterolateral thigh flap. Complications were observed in a portion of patients, most frequently including infection, fistula, and partial or total flap necrosis. In some cases, revision of the microvascular anastomosis was required. Hospital stay was longer among patients with complications, while flap type did not significantly influence the outcome.Conclusions: The ten-year experience of the Department of Maxillofacial Surgery at Dubrava University Hospital confirms that free microvascular flaps are a reliable method for head and neck reconstruction, with a high rate of success. Complications, although expected, require timely recognition and a multidisciplinary approach in order to achieve optimal treatment outcomes and reduce hospital stay.

Key words: Free microvascular flaps; Head and neck reconstruction; Free flap complications

N10 NURSING CARE OF PATIENTS DURING THE APPLICATION OF PLASMA RICH IN GROWTH FACTORS IN ORAL SURGERY PROCEDURES

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Introduction: The PRGF (Plasma Rich in Growth Factors) protocol is an innovative method used in oral surgery to improve the process of healing and tissue regeneration. This protocol involves the use of the patient's own blood to isolate plasma rich in growth factors, which is then applied to the surgical site. PRGF is used in various oral surgical procedures, including implantology, tooth extraction, and bone reconstruction. Materials and methods: For the purposes of this presentation, literature from the fields of PRGF, anatomy, oral surgical procedures, nursing care of surgical patients, and nursing diagnoses published between 2000 and 2023 was analyzed. Results: The PRGF protocol represents a significant advancement in oral surgery, enabling faster and more effective healing with minimal complications. Perioperative healthcare within the context of the PRGF protocol encompasses a wide range of activities performed by nurses and the entire healthcare team, divided into three phases. In the preoperative phase, emphasis is placed on assessing the patient's health condition, including medical history, examination, and tests, as well as preparing the patient both mentally and physically. In the intraoperative phase, alongside all guidelines for aseptic work, the procedure has its own specificities related to the PRGF protocol, namely venipuncture and preparation of the PRGF product. The postoperative phase involves monitoring the patient's condition after surgery and adherence to prescribed instructions. Conclusions: Perioperative healthcare and nursing care play a crucial role in the success of this protocol, ensuring that patients receive comprehensive care before, during, and after surgical procedures.

Key words: PRGF; Perioperative care; Oral surgery; Asepsis

N11 APPLICATION OF PRGF IN THE TREATMENT OF TEMPOROMANDIBULAR JOINT DISORDERS – THE ROLE OF THE OPERATING ROOM NURSE/TECHNICIAN

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Introduction: The temporomandibular joint (TMJ) is one of the most complex joints in the human body, and dysfunctions affecting this region are increasingly frequent in clinical practice. Symptoms include pain, limited mouth opening, joint sounds during movement, and reduced quality of life. Traditional treatment methods for TMJ disorders have included both conservative and surgical approaches; however, in recent years, biological therapies aimed at tissue regeneration have gained attention. One such method is the application of PRGF (Plasma Rich in Growth Factors), an autologous plasma enriched with growth factors obtained from the patient's own blood. Materials and methods: The presentation will highlight the application of PRGF in the treatment of TMJ dysfunctions from a nursing perspective. The focus will be on the nurse's role in preparing and applying the method: patient education, preparation for the procedure, ensuring sterile conditions, proper handling of blood samples, and providing postoperative care and support. The biological properties of growth factors, which stimulate the regeneration of cartilage, synovial membrane, and surrounding soft tissues, will be emphasized. Results: According to available literature and practical experience, PRGF therapy demonstrates significant advantages compared to conventional TMJ treatments. Documented benefits include pain reduction, improved joint mobility, reduced need for invasive surgical procedures, and faster recovery times. The nurse's role in this process proves to be essential for procedural safety, successful recovery, and patient satisfaction. Conclusions: The application of PRGF in the treatment of temporomandibular joint dysfunction represents a valuable step toward personalized medicine and improved patient outcomes. As an integral member of the multidisciplinary team, the operating room nurse / technician plays a crucial role in the implementation of this method, continuous education, and the provision of high-quality healthcare.

Key words: Temporomandibular joint; PRGF; Growth factors; Regeneration; Nurse's role