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DECLINE IN MAXILLOFACIAL INJURIES DURING THE PANDEMIC: THE HIDDEN FACE OF COVID-19

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Abstract: Maxillofacial injuries result from a variety of daily activities. Traffic accidents, interpersonal violence, and falls represent some of the most common etiological factors behind maxillofacial fractures. During the COVID-19 outbreak, the social distancing measures imposed by healthcare authorities aimed at abolishing the spread of the viral infection. This study aimed to evaluate the effect of social distancing measures on the incidence of maxillofacial injuries.

OSTEOLIPOMA OF THE MAXILLARY BONE: A CASE SERIES

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Abstract: Lipomas are benign mesenchymal neoplasms of soft tissue that can be found commonly in any part of the human body. A rare lipoma variant, known as an osteolipoma or an ossifying lipoma, may occur; however, little has been written about this type of lipoma characterized by a classical lipoma with areas of osseous metaplasia. The purpose of this paper is to present a cases of osteolipoma in the maxillafacial discrict, their radiological findings and the histopathology.
Case presentation: A case report is presented where the diagnostic and therapeutic methods are illustrated in the treatment of this rare pathology affecting the bone tissue which must necessarily be placed in differential diagnosis with other malignant pathologies. Localization, size and invasion of the surrounding structures were the main prerogatives for surgical treatment in these 3 rare cases of osteolipomatous pathology, carefully analyzed post-operatively by pathological anatomy colleagues.
Conclusions: The few cases in the literature highlight a need for the clinician and pathologist to keep this entity in mind when considering the radiographic and clinical differential diagnoses for these lesions. Histopathological diagnosis according to the criteria mentioned in this review will help to categorize these rare lesions and further understand their origin. Despite their benign nature and lack of recurrence, it is important to differentiate them from liposarcomas when presented with clinical evidence of malignancy.

Keywords: Bone tumor; Osteolipoma of the skull bone; Jaw reconstruction; Osteosarcoma; Hemimaxillectomy; Facial paralysis

HOW CAN WE QUANTIFY QUALITY OF LIFE CHANGES AFTER TREATING PATIENTS WITH HEAD AND NECK CANCER?

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Objective: This study aimed to assess the impact of head and neck cancer and its treatment on the quality of life (QoL) of diagnosed patients. Specifically, the focus was on evaluating clinically significant changes using certified QoL instruments, namely the EORTC QLQ-C30 and EORTC QLQ-HN35.
Materials and Methods: Baseline and two-month follow-up data were collected from the patients through the administration of the EORTC QLQ-C30 and EORTC QLQ-HN35 questionnaires. The Minimal Clinically Important Differences (MCID) were calculated using both anchor and distribution-based methods to determine meaningful changes in deterioration and improvement. The Karnofsky Performance Scale (KPS) was used as the anchor for assessing significant change.
Results: Statistically significant and clinically meaningful changes in symptoms were observed in patients who experienced deterioration. Using the KPS anchor, deterioration in various domains ranged from 7.2 units (physical functioning) to 16.7 units (Global Health Status), while improvements ranged from 1.6 units (role functioning) to 6.6 units (Global Health Status). Both instruments yielded distribution-based estimates close to 0.5 standard deviations.
Conclusion: The EORTC QLQ-C30 and QLQ-HN35 question-

naires, particularly the significant changes detected through them, play a vital role in evaluating the impact of treatment methods on the quality of life and for follow-up purposes. The MCID values derived from this study are valuable for determining sample sizes and designing clinical trials.

Keywords: Head and neck cancer, Quality of life (QoL), QoL instruments, EORTC QLQ-C30, EORTC QLQ-HN35

METASTATIC INTRADUCTAL CARCINOMA TO THE UPPER JAW FROM THE SUBMANDIBULAR GLAND. PRESENTATION OF A RARE-CASE

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Objectives. The presentation of a metastatic low grade intraductal carcinoma (LG-IC) from the submandibular gland to the upper jaw (lip). LG-IC is a rare malignant tumor of the salivary glands which has a very good prognosis, it is uncommon to metastasize, in contrast with the other types of salivary gland malignancies and therefore must be differentiated.
Materials and methods: A 52-year-old woman is presented, who was first diagnosed and treated in another clinic in 2019 for an LG-IC in the left submandibular gland. The clinical case and its management, along with literature from PubMed, Scopus etc., is also presented.
Results: Two years after the excision, the woman was admitted to our department with a new lesion, this time in the upper jaw-lip on the left side, which also turned out to be LG-IC. It was an exophytic lesion, smooth surfaced and without ulceration, situated in the left mucosal area of the lip. An excision was performed with clear surgical margins. Post- operatively, diagnostic workup was performed with a full body CT and a head and neck MRI. A new PET/SCAN was performed 6 months post-operatively with no signs of disease.
Conclusions: Literature on this rare histopathological entity as well as the differences with the other malignant lesions of the salivary glands and the frequency of metastasis was reviewed. Typically, LG-IC lesions are not associated with pain or other symptomatology. They rarely metastasize and differential diagnosis from the other much more aggressive types of salivary gland cancers is crucial, due to their totally different behavior.

Keywords: Low grade Intraductal Carcinoma, salivary gland tumours, oral cancer

cGVHD AND BIOMARKERS RESEARCH IN HUMAN HISTOPATHOLOGIC SAMPLES FROM ORAL MUCOSA

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Objectives: Chronic graft versus host disease (cGVHD) is a major cause of morbidity and mortality in allogeneic hematopoietic cell transplant (alloHCT) patients. Consensus criteria have been developed taking into account histopathologic samples of the oral mucosa which is accessible for routine biopsy, in order to guide diagnostic and treatment decisions for cGVHD.
The biopsies of the oral mucosa demonstrate mostly periductal lymphocyte infiltration, fibroplasia and mixed lymphocytic and plasmacytic inflammation. Nonetheless there are no up-to-date validated biomarkers in order to assess an early diagnosis and earlier treatment for HCT patients. This study aims to search for biomarkers in samples of the oral mucosa or minor salivary glands and in blood samples and finally to assess the quality of life in these patients.
Materials and methods: Oral Samples from patients who have undergone alloHCT in the JACIE-accredited Transplantation Unit of our Hospital will prospectively be studied in the pathology department. The biopsies will be obtained from oral lip mucosa as well as at least five labial minor salivary glands two times. First after 3 months from the transplantation and secondly after 4 months following the first biopsy. At the same time questionnaires for Quality of life will be assessed and mucosal index will be calculated for both timelines (biopsy 1 and 2). Blood samples will be collected and assessed for novel biomarkers.
Results: We have currently enrolled 35 patients. CGVHD has been detected in 14 patients. The study is under pilot assessment and the results are preliminary.
Conclusions: cGVHD as a multiorgan autoimmune disorder will be occurring in about 50% of alloHCT patients with major risks. The need of specific biomarkers in everyday clinical practice is obvious and will allow better prognosis and treatment protocols for these patients.

Keywords: cGVHD, oral mucosa, biomarkers

MESENCHYMAL STEM CELLS IN MRONJ TREATMENT: POTENTIAL APPLICATIONS AND PROMISING REGENERATIVE THERAPIES

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Objectives: Medication-Related Osteonecrosis of the Jaw (MRONJ) is a condition causing jawbone tissue necrosis, often linked to anti-resorptive and anti-angiogenic medications. Regenerative therapies have emerged as potential treatments, with mesenchymal stem cells

(MSCs) gaining attention due to their regenerative and immunomodulatory properties. MSCs exert therapeutic effects through paracrine activity, immunomodulation, and bone-forming cell differentiation. Their secreted factors promote tissue regeneration, reduce inflammation, and enhance angiogenesis. This poster summarizes MSCs' potential applications in MRONJ treatment.
Methods and materials: The results presented on this poster were conducted by systematically searching various electronic databases, including PubMed, Embase, and Web of Science. The inclusion criteria encompassed preclinical and clinical studies investigating the application of MSCs in MRONJ treatment. Data from selected studies were extracted and synthesized to provide a comprehensive overview of the current understanding of MSC-based therapies in MRONJ.
Results: While new pharmacological treatments have shown promise, they are not curative and can have significant side effects. In contrast, MSC-based therapies, including autologous cell transplantation, have demonstrated effectiveness. Recent studies on animal models of MRONJ have shown beneficial effects in promoting tissue repair and reducing inflammation. These findings have led to their exploration as a potential adjacent treatment option for MRONJ in large-scale clinical trials.
Conclusions: Preclinical and clinical studies have shown that MSC-based therapies hold promise for MRONJ treatment by promoting bone regeneration, angiogenesis, and immune modulation. Further research is needed to optimize MSC potential, establish protocols, and evaluate safety and efficacy. Successful outcomes may lead to novel regenerative treatments, improving the lives of MRONJ patients.

Keywords: Medication-Related Osteonecrosis of the Jaw, MRONJ, mesenchymal stem cells, regenerative therapy

MANAGEMENT OF ENLARGEMENT OF THE SUBLINGUAL GLANDS IN PREPARATIONS FOR DENTAL IMPLANTATIONS

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Purpose: The aim of the current study was to present a series of the sublingual gland (SLG) enlargement that complicated manipulations with dental implants and to discuss the management of this condition.
Materials and Methods: Our retrospective study included 16 patients (12 F, 4 M) ranging in age from 27 to 80 years (mean 58.6 years) who were observed from 2015 to 2022. All patients were referred by prosthodontists to the Department of Oral and Maxillofacial Surgery in the Galilee Medical Center and Assuta Tel Aviv Medical Center due to swelling in the floor of the mouth that caused difficulties in fitting of the dental rehabilitation.
Results: In our series, 12 patients were treated by surgical removal of the SLG, 4 patients refused to undergo the procedure. Surgery was suggested to those patients who suffered from pain and discomfort around the implant healing abutments. Of the 16 patients, five patients had SLG enlargement in the right side, eight patients in the left side, and three patients had the bilateral SLG enlargement. All patients had at least one missing molar. The period of missing teeth ranged from 6 to 12 years. All twelve patients who underwent the surgery successfully completed their dental rehabilitation by prosthodontists after 3 months of check-ups. The patients who refused to undergo the surgery, unfortunately could not proceed with the rehabilitation and the implants were submerged.
Conclusion: Dental rehabilitation and dental implantation procedures cannot be properly performed in cases with the enlarged SLG. The excision of such SLGs is safe and eliminates this problem. The removal of the enlarged SLG should be performed prior to dental implantation.

MICRO-RNAS IN ORAL SQUAMOUS CELL CARCINOMA: A NARRATIVE UPDATE ON CURRENT CONCEPTS

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Objectives: MicroRNAs are a group of endogenous, non-coding, 18–24 nucleotide length single- strand RNAs that regulate gene expression at the post-transcriptional level through mRNA degradation or translational repression. They are involved in regulating diverse cellular biological processes leading to malignancies, including tongue squamous cell carcinoma (SCC). The purpose of this study is to provide the current concepts on the role of specific miRNAs that seem to be important in pathogenesis of tongue SCC.
Material and methods: A narrative literature review was performed on miRNA expression in tongue SCC
Results: We identified some deregulated miRNAs which seem to have an important role in regulation of cell survival, proliferation, differentiation, migration, invasion, apoptosis and metabolism.
Conclusions: It is therefore important to further explore their roles in carcinogenesis and treatment of tongue SCC.

Keywords: Tongue squamous cell carcinoma; human genome; microRNAs; regulation; target genes; pathways.

IS SUPRACLAVICULAR ARTERY ISLAND FLAP (SAI) A VIABLE ALTERNATIVE TO FREE TISSUE TRANSFER (FTT) IN HEAD AND NECK RECONSTRUCTION? A SYSTEMATIC REVIEW AND META-ANALYSIS

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Objectives: The aim of this study is to compare the outcomes of Supraclavicular Artery Island Flap (SAI) versus Free Tissue Transfer for head and neck reconstruction.
Methods: We performed a systematic review of MEDLINE (via PubMed), Scopus and Cochrane Library database according to the PRISMA guidelines. Only comparative studies between the two techniques were included. Random-effects model meta-analyses were performed.
Results: Eight studies, reporting a total of 402 patients and same number of flaps, 165 of which underwent reconstruction using supraclavicular artery island flap and 237 reconstructed with free tissue transfer were identified. No statistically significant differences were observed regarding major complications, total flap necrosis, partial flap necrosis, post operative fistula formation, donor site dehiscence, recipient site dehiscence and total flap area.
Conclusion: Supraclavicular artery island flap and free tissue transfer seem to be comparable when used in head and neck reconstruction.

Keywords: Supraclavicular artery flap; free tissue transfer; free flap; Head Neck cancer; systematic review; Meta-Analysis

SHARED DECISION-MAKING AND ORAL-MAXILLOFACIAL SURGERY PRACTICE

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Introduction: Shared decision-making (SDM) empowers patients to actively participate in clinical decisions. It is a collaborative decision-making process between the patient and provider for preference-sensitive healthcare-related decisions. A fundamental concept underlying SDM is the recognition that every patient is unique and has a right to select the preferred treatment options. The role of the physician is to provide an expert opinion on the options available as well as demonstrate the evidence for (and against) each.
Objectives: To explain the concept and clinical implementation of the shared-decision- making model in the practice of maxillofacial surgery.
Materials and Methods: An electronic search of the PubMed database was conducted to identify relevant studies, in English, from 2010 to present. The following keywords "maxillofacial surgery" and "shared decision making" were entered into the search engine.
Results: The SDM process allows the patient to have an input in the treatment decision. Research showed that the benefits of SDM include increased patient satisfaction, improved communication between patients and providers, decreased perioperative anxiety, cost savings, decreased litigation and better patient comprehension of risks. Informed consent has now become the basis of shared decision-making. Any serious conversation between patients and surgeons must incorporate the patients' unique values, beliefs, and experiences that shape their expectations of the care to be provided.
Conclusion: The success of SDM reflects its potential to enhance patient care as it acts as a tremendous tool for treatment planning. Patients appreciate the autonomy of consulting with their surgeon and reaching a well-informed decision based on the best available evidence. With more recognition of formalized SDM tools and processes, providers and healthcare systems can expect patients to continue taking more active roles in the development of treatment plans.

Keywords: Shared decision-making, Oral and Maxillofacial Surgery

PRECISION DENTISTRY: CHALLENGES FOR ORAL AND MAXILLOFACIAL SURGERY

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Objective: To explain the concept and clinical implementation of Precision Dentistry and how Oral and Maxillofacial Surgery is managing this challenge.
Introduction: Precision Medicine can be defined as an emerging approach for disease treatment and prevention, taking into account individual variability in genomics, environment and lifestyles. This advanced form of care refers to the use of personal data and biomarkers to create protocols and treatments that improve health outcomes. Precision Dentistry is a data-driven approach classifying patients into subgroups allowing tailored interventions.
Methods: An electronic search of the PubMed database was conducted to identify relevant studies, in English, from 2010 to present. The

following keywords "maxillofacial surgery" and "precision dentistry/ medicine" were entered into the search engine.
Results: Precision Dentistry(PD) involves tailoring medical/dental treatment to each patient's individual characteristics, building on modelling and prediction making. Research showed that this new understanding of diseases is revolutionary, a data-driven approach that classifies patients into subgroups allowing tailored treatments and interventions. The success of this approach depends on its ability to be predictive, preventive, personalized and participatory. Precision Medicine and Dentistry promise for improving healthcare delivery while also reducing costs. This approach relies on genetic and molecular data and the social determinants of health, along with the collaboration of clinicians, researchers, bioinformaticians, data scientists, and, most importantly, patients.
Discussion: PD should not only consider the reversal of a single-gene variant pathophysiological mechanism but also consider multiple non-genetic factors. Most dental diseases are complex, meaning they can be caused by the interface of different genetic, environmental, and behavioral factors. That is the reason why yet, PD approaches are not always available and successfully implemented in the everyday practice. Although understanding of the determinants of craniofacial deformities is still limited, there is a great potential for future chances for providing the best available option to each patient according to their individual genomics. Apart from craniofacial syndromes, PD would allow the understanding of a variety of conditions as the susceptibility to temporomandibular joint disorders, variability of patient's response to different medicines as well as the prevalence of mucosal disorders like oral lichen planus, aphthous ulcerations or pemphigoid and pemphigus in a specific number of patients among the general population. Generally, the implementation of PD in Oral-Maxillofacial Surgery is promising both in practice and research. PD is beneficial for the surgeon by providing clear, individualized and evidence-based diagnostic, preventive and therapeutic treatment options.
Conclusion: Successful implementation of PD requires training of "precision-minded" practitioners. Thus, expansion of this model will require the incorporation of these concepts and frameworks in dental educational curricula. PD brings the promise of improving the ability of clinicians to more precisely diagnose, manage, and even prevent human disease and deformities. Oral-Maxillofacial Surgeons should recognize, appreciate and reflect on the implications PD brings.

FIXATING THE MANDIBULAR ANGLE. IS THE SECOND MINIPLATE NECESSARY OR ONE MINIPLATE IS ENOUGH? A SYSTEMATIC REVIEW AND META - ANALYSIS

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Objectives: The aim of this study is to compare the outcomes after using one miniplate fixation in the external oblique ridge versus two miniplate fixation for mandibular angle fractures.
Methods: A systematic review of MEDLINE (via PubMed), Scopus and Cochrane Library database was performed according to the PRISMA guidelines. The research question was addressed using the PICO criteria. Only comparative studies between the two techniques were included. Random-effects model meta-analyses were performed.
Results: Seventeen studies, comprising a total of 1667 patients, 846 undergoing one miniplate fixation and 854 undergoing two miniplate fixation for mandibular angle fractures were identified. No statistically significant differences were observed regarding surgical site infection (standardized mean difference [SMD]= 0.94, 95% confidence interval [CI]: [0.69] – [1.28], p=0.68, I2=0.00%), post-operative malocclusion (SMD= 0.97, 95% CI: [0.53] – [1.18], p=0.25, I2=0.00%), post-operative neurosensory dysfunction (SMD= 0.67, 95% CI: [0.37] – [1.22], p=0.19, I2=73.93%), pseudoarthrosis formation (SMD=0.90, 95% CI: [0.58] – [(1.39], p=0.63, I2=0.00%). Wound dehiscence was marginally less common in the one miniplate group (SMD=0.52, 95% CI: [0.28] – [0.98], p=0.04, I2=54.34%). The probability of scarring formation (SMD=0.13, 95% CI: [0.05] – [0.32], p=0.00, I2=0.00%) and hardware failure (SMD=0.36, 95% CI [0.21] – [0.62], p=0.00, I2=29.33%) were statistically significantly higher in the two miniplates arm.
Conclusion: One miniplate fixation and two miniplates fixation of mandibular angle fractures have similar results regarding post operative infection, malocclusion, neurosensory dysfunction and pseudoarthrosis formation while wound dehiscence, hardware failure and scarring seem to be more common when two miniplates are used as a fixation technique.

Keywords: One miniplate; Two miniplates; Mandibular angle fracture; Meta-Analysis; Complications;

NEW ADVANCES IN PATIENT-SPECIFIC IMPLANTS; A CASE REPORT OF A MANDIBULAR RECONSTRUCTION

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Objectives: RReconstruction of mandibular defects after tumor resection or trauma is one of the most challenging problems facing maxillofacial surgeons. A plethora of autografts and alloplastic materials have been used in the reconstruction of these types of defects. The

aim of this study is to present a case of mandibular defect reconstruction with 3D-printed patient-specific titanium implant.
Materials and methods: A 51-year old male patient who had underwent a left segmental mandibulectomy due to cement-ossifying fibroma and a reconstruction titanium plate was used for reconstruction, after 8 years presented with mandibular pain due to recon plate fracture.
Results: The patient underwent surgery where the fractured recon plate was removed and a 3D- printed patient-specific titanium implant was used for reconstruction. From the computed tomography the contralateral side was mirrored for the construction of the implant. The postoperative course was uneventful with esthetic and functional results.
Conclusion: The technological advances in medicine opened new possibilities in reconstructive surgery with the use of individualized designed biomaterials, and now, it is possible to use the patient's computed tomography (CT) to construct patient-specific implants (PSIs). These implants can have excellent esthetic and functional results especially in benign tumours or trauma like in our case.

MAJOR COMPLICATIONS OF PANSINUSITIS IN CHILDREN; PRESENTETION OF A SUBDURAL EMPYEMEA

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Objectives: Subdural empyema can be a life-threatening complication of pansinusitis if not properly diagnosed and treated especially in children population. The aim of this study is to present a case report in order to highlight the importance of early diagnosis and treatment.
Materials And Methods: An 8 year old male patient after 15 days of hospitalization in a tertiary hospital due to paranasal and frontal sinusitis, displayed clinical symptoms of orbital cellulitis and central nervous system infection with febrile seizures and hemiplegia and admitted in the intensive care unit. The computed tomography showed a subdural empyema.
Results: The patient underwent in a combined approach surgical drainage of the left paranasal and frontal sinus by an oral and maxillofacial team and frontal craniotomy and drainage of the subdural empyema by an neurosurgery team. The postoperative clinical course was uneventful.
Conclusion: Secondary central nervous system infections as a complication of sinusitis in children population is not a rare entity and can be lethal if not diagnosed and treated early. A multidisciplinary team is mandatory for the most efficient traetment modality.

COMPLEX RECONSTRUCTION OF POST-TRAUMATIC DEFECTS; A CASE REPORT OF ORBITAL ROOF REPLACEMENT

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Objectives: Orbital roof fractures are among the least frequently encountered facial fractures. They rarely present as isolated fractures and are associated with high-impact injuries as well as multiple facial and neurological injuries. The aim of this study is to present a case of post traumatic orbital roof defect reconstruction after a motor accident.
Materials and methods: A 57-year old male patient underwent craniectony of the right side of the frontal bone due to a comminuted depressed fracture by the neurosurgical team. The patient was referred to our clinic 3 weeks after due to pulsative exophalmos and diplopia.
Results: The patient was admitted for surgery where in collaboration with the neurosurgery team an autologous temporal bone graft was used for the reconstruction of the orbital roof and the supraorbital rim and a pericranial flap was used for the coverage of the grafts. Titanium mess was used by the neurosurgeons to cover the temporal bone defect. The postoperative course was uneventful. At the four months follow up the patient has no pulsative exophalmos or diplopia
Conclusion: Management of orbital roof fractures varies based on individual clinical features. In rare cases defects of the orbital roof may occur after neurosurgery treatment. Reconstruction with autologous bone grafts from the cranium can be a safe and efficient treatment modality like in our case.

DIFFERENCES IN REFERRAL OF PATIENTS WITH HEAD AND NECK DISORDERS AMONGST GENERAL MEDICAL PRACTITIONERS IN GREECE; A CROSS- SECTIONAL STUDY

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Objectives: Oral and Maxillofacial Surgery (OMFS) is among the newest established medical specialties and its full scope is not fully known by other specialties. The aim of the present study is to record the perception of OMFS scope by general medical practitioners (GMPs) of the National Health Service in Greece.
Materials and methods: A cross-sectional study was conducted in GMPs via a structured questionnaire. Questions involved various head and neck disorders and possible referring medical specialties. 66 answered questionnaires were included in this study. Participants were established to regional health practices, health centres or hospitals.

Results: 77.2% of the participants would refer a facial laceration to a plastic surgeon and only 7.2% to an OMFS. 89.3% would refer a zygoma fracture to an OMFS and 10.6% to an ENT. The vast majority would refer a tongue cancer, a neck mass and a mouth lesion to an ENT (74.8%, 81.8%, and 48% respectively).
Conclusion: OMFS scope awareness of GMPs can be considered low. Thus, widening the knowledge of OMFS practice in primary grade medical practitioners is of high importance. Early exposure of medical students to the specialty could be a valid option to achieve this target.

ANGIOSARCOMA OF THE MAXILLA AND THE MAXILLARY SINUS: A CASE REPORT

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Angiosarcomas of the oral cavity are considered extremely rare. A 47 year-old man presented to our hospital with an extensive tumor-like lesion originating from upper gingiva. A full body CT scan was performed and revealed that the lesion was extending to his hard palate and maxillary sinus. A biopsy was rapidly done which confirmed the diagnosis of angiosarcoma. The lesion presented aggressive proliferation after biopsy which created numerous difficulties for the patient during eating, closing the mouth with bleeding symptoms. The patient underwent another surgery under topical anesthesia in order to facilitate his clinical symptoms and adjuvant chemotherapy and radiotherapy was decided. The patient has shown no signs of recurrence after one year follow up. A review of the literature showed only four cases of angiosarcomas in the maxilla reported worldwide.

MAXILLARY ACTINOMYCOSIS MIMICKING MALIGNANCY: A CASE REPORT

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Objectives: Actinomycosis is an uncommon soft tissue infection caused by Gram-positive, anaerobic bacteria, with infrequent bone involvement. Approximately 50% of cases affect head and neck region but involvement of the maxilla is rare (5,7%). This poster presents an unusual case of maxillary Actinomycosis extending into the maxillary sinus, with radiologic findings resembling a space occupying lesion. A brief review of the literature is also presented.
Materials and methods: A 48 year old male patient presented to the outpatient clinic complaining of an oroantral fistula in the edentulous area of 15, appearing 1 year ago after his hospitalization for covid-19. He reported extraction of all posterior upper right teeth 20 years ago. CT scan was undertaken, demonstrating an ill-defined lesion extending into the maxillary sinus causing extensive bone erosion. The patient underwent incisional biopsy and the histopathology report established the diagnosis of Actinomycosis.
Results: After consulting with infectious diseases Specialists, IV Ampicillin/Sulbactam and Metronidazole were administered and the patient underwent surgical debridement and closure of oroantral fistula with locoregional flaps. The patient was discharged after receiving 2 weeks of IV antibiotics and continued treatment with p.os Amoxicillin/Clavulanic acid for 3 months, without complications.
Conclusions: Actinomycosis is a rare entity, which often tends to mimic other pathologies such as granulomatous diseases or malignancy. Hence, it is important to encompass actinomycosis in the differential diagnosis of aggressive lesions of the mouth The initial diagnostic workup is frequently nonspecific, with only 10% of cases successfully identified. A definitive diagnosis is usually made only after surgical excision and histologic examination. Antibiotics are an essential part of treatment, with Penicillin being the drug of choice and usually administered for 2 to 12 months. Surgical therapy is often indicated for curettage of bone, resection of necrotic tissue, excision of sinus tracts, and drainage of soft tissue abscesses.

BILATERAL CORONOID HYPERPLASIA CAUSING SEVERE MOUTH RESTRICTION: CASE REPORT & LITERATURE REVIEW

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Objectives: Coronoid process hyperplasia is a rare condition that can lead to limited mouth opening by impingement of the elongated coronoid process on the medial surface of the zygoma. The aetiology is not completely known. This poster reports a case of trismus due to bilateral coronoid hyperplasia, diagnosed late and treated successfully with coronoidectomy and postoperative physiotherapy. A review of the literature is also presented, concerning epidemiology, etiology, diagnosis and treatment.
Materials and methods: A 17 year old male presented at the Department of Oral and Maxillofacial Surgery complaining of limited mouth opening, progressively worsening for the last two years. The preoperative mouth opening was measured at 15mm. Radiographic and CT imaging revealed significant enlargement of both coronoid processes. His medical history was uneventful. Intraoral bilateral coronoidectomy was carried out, postoperative physiotherapy by a Physiotherapist and regular longlasting follow up were advised.
Results: A mouth opening of 25mm was achieved just after the operation. Postoperative course was uneventful. After 3 months of physiotherapy, the patient achieved a mouth opening of 38mm. The biopsy showed no specific findings and the hyperplasia was accredited to temporalis muscle hyperactivity.
Conclusions: Treatment of coronoid hyperplasia aims to restore limited mouth opening whilst maintaining a long term stable result. Early diagnosis is crucial, but it is often delayed due to the symptoms being

attributed to TMJ disorders. Progressive limitation of mouth opening without other symptoms related to temporomandibular or masticatory muscle disorder, are clinical signs indicative of this condition. CT is the imaging modality of choice, since Panoramic X-rays can often be non diagnostic. Surgical treatment is necessary in the majority of cases with intraoral coronoidectomy being the operative procedure most commonly performed. Postoperative rehabilitation is of paramount importance, since tissue scarring can compromise the surgical result.

RECONSTRUCTION OF MAXILLOFACIAL DEFECTS WITH CONVENTIONAL AND ADVANCED TECHNOLOGY: A REVIEW

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Objectives: The purpose of this study is to evaluate treatment methods of maxillary defects resulting from resection. We will present and compare various modalities of maxillary reconstruction ranging from prosthetic restoration, autologous bone grafting and the more advanced bio-ceramic 3D-printed materials.
Materials and methods: Bibliographical research was conducted using electronic databases, such as (PubMed, NCBI, and Google Scholar), with the following keywords: maxillary tumors, biodegradable scaffolds, 3D printers, palatal obturators, fibula bone grafting, craniomaxillofacial defect.
Results: This presentation focused on the techniques concerning large defects of the maxilla which can involve the palate. Database search retrieved approximately sixty scientific resources. Head and neck cancer corresponds to 1.5% of all human malignant tumors, while maxillary sinus cancer corresponds to 0.2%. The most common site of sinonasal and paranasal carcinoma is the maxillary sinus, which accounts for 60-70% of all cases. In comparison to the maxillary restoration with palatal obturators as well as the fibula bone grafting technique, the 3D printed bio-ceramic materials facilitate the treatment by reducing surgery duration, patient's discomfort, and recovery. Patient specific 3D-printed scaffolds adequately fill the maxillary defect and promote osseous regeneration to the occupied defect area while remaining stable in the body for a long time.
Conclusions: There is a great deal of optimism surrounding the use of 3D printed bio-ceramic materials which are adjusted accurately in the area of defect. They serve as ceramic scaffolds that promote guided osseous regeneration. Although for decades prosthetic restorations have provided satisfactory results in restoring maxillary defects and offering functionality to the patient's life, more permanent benefits are achieved with surgery.
As a result of the latest innovations, the surgical procedure has become more person-centered and simplified.

PATIENT INSPIRED BIO-PRINTABLE HARD-TISSUE CONSTRUCTS FOR TISSUE RECONSTRUCTION

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Objectives: VWhen approaching the task of functional regeneration of large-scaled defects, both heavily vascularized tissue grafts and patient-specific anatomy are necessary. Autologous tissue-harvest, considered as the current standard of care, possess considerable drawbacks such as tissue-site morbidity and post-operative pain. Tissue engineering approaches relying on both 3-dimensional design and biological induction of implants can heavily promote grafts survival during the engraftment process, enabling the transition from harvested autografts and synthetic implants toward innate tissue constructs for tissue reconstruction.
Materials and Methods: First, medical imaging from patients undergoing maxillofacial midface reconstruction was evaluated and segmented, and to yield the anatomy of relevant facial features such as the lower orbital rim. Next, 3-dimensional design of a humans-scaled tissue construct was performed, followed by 3D printing of designed constructs using a sacrificial butene-diol vinyl alcohol copolymer. Next, biohybrid PCL-ECM constructs were fabricated. These in turn underwent vascularization and biological induction by loading human-derived adipose mesenchymal stem cells and microvascular endothelial cells. ECM deposition, neo vasculature, mineralization, and geometry we evaluated using high resolution microCT, confocal microscopy, metabolism assessment and cytokine secretion.
Results: The use of mesenchymal stem cells dramatically increased both vascularization density and tissue deposition within the printed constructs by more than 30 percent. Moreover, mineralization was positively affected by the incorporation of endothelial cells within the tissue constructs. Constructs that underwent induction with co-cultures showed a high degree of volumetric compatibility to segmented areas from patients' medical imaging, with less than 5 percent of volume loss compared to the original tissue volume.
Conclusions: Propper cellular induction of tissue engineered constructs is key in the attempts to create human-scaled tissue replacements for clinical purposes, that can serve as an exact replica of a maxillofacial bone graft for defined defect reconstruction.

"THE ROLE OF EXTRACTION OF THIRD MOLAR IN FIXATION PATTERN IN MANDIBULAR ANGLE FRACTURES"

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Objective: The presence of an impacted third molar (3M) increased the risk of mandibular angle fractures (MAFs).
Purpose: To investigate the differences in the fixation patterns in MAFs, in terms of number and thickness of plates, between patients in whom a third molar was maintained or removed.
Materials and methods: A retrospective study including 749 patients ≥16 years of age, with 774 MAFs from six European maxillofacial trauma centers from 2008 to 2018 (Coordinating Center: Division of Maxillofacial Surgery, University of Turin, Italy). The patients treated by open reduction and internal fixation (ORIF), they had an erupted or impacted 3M in the fracture line and had a follow-up duration of 6 months. The study population was divided into patients in whom the 3M was maintained (group 1: 548 patients) and those in whom the 3M was extracted (group 2:201 patients), and the two groups were compared for differences in the ORIF pattern.
Results: The majority of patients was males (89,9%), ranged in age from 16 to 85 years (mean: 30.7). The main cause of MAFs was assault (54.1%). The most frequent fracture pattern was single angle fracture (42.6%) and the main surgical approach was intraoral (67%). A total of 1,050 plates were placed: 849 were ≤1.4 mm (80,9%) and 201 ≤1.5 mm thick (19,1%). Statistically significant differences were seen in the number of ≤1.4 mm plates between the two groups for single undisplaced/displaced MAF and for undisplaced/displaced angle + parasymphysis/body fractures (P-value≤0,5).
Conclusion: The optimal surgical management of MAFs remains a matter of debate. Although the recent trend is toward a functional nonrigid fixation with a single miniplate on the external oblique ridge, the majority of surgeons of our sample perform a rigid fixation in the angular region when removing the 3M.

Keywords: Extraction, Fixation pattern, Fracture, Mandibular angle, Third molar

SIALENDOSCOPY. CLINICAL RESULTS

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Objectives: TSialendoscopy is a minimally invasive technique, to explore the duct system and to treat obstructive salivary duct disease without incisions. The purpose of this case series study is to describe our clinical experience with endoscopic salivary duct exploration and stone removal as well as to estimate the long term success rate.
Materials and Methods: A retrospective study of patients with sialadenitis secondary to salivary duct obstruction was performed. Inclusion criteria were the use of sialendoscopy for the treatment of obstructive salivary gland disease of the parotid or the submandibular gland. Exclusion criteria included neoplasms, purulent infection, duct rupture, medical conditions contraindicated for general anesthesia. The procedure was performed under general anesthesia in all cases. Endoscopes of 1.3 and 1.1 mm in diameter were used.
Results: 240 patients were included in the study. Duct dilatation and navigation was accomplished in 221 patients through the duct orifice of the involved salivary gland. Sialoliths were visualized in 137 cases which were removed in 130 cases. Follow up ranged from 5 to 19 years. Rate of successful treatment of the inflammation and relief of symptoms was estimated at 90%.
Conclusions: The results of this case-series, demonstrate the feasibility of endoscopic access to the submandibular and parotid duct systems for management of sialolithiasis and strictures. This may become a commonly used approach if training and necessary equipment is widely provided.

FACIAL AESTHETICS IN ORTHOGNATHIC SURGERY PATIENTS

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Objectives: SHow does Orthognathic surgery approach the facial aesthetics? Is it true that the functional rehabilitation after orthognathic surgery promotes the improvement of facial aesthetic proportions as well?
Materials – Methods: STO analysis (Surgical Treatment Objective introduced by Professor Larry M. Wolford) was used in 54 patients with dentofacial deformities who underwent surgical orthognathic corrections from year 2000 till 2011 in Private Hospitals of Athens Greece. Preoperative orthodontics were performed and a small period of postoperative Orthodontic treatment followed to achieve the optimal results.
Results: 28 Le Fort I osteotomies, 36 Bilateral Sagittal Split Mandibular Osteotomies and 13 genioplasties were performed correcting occlusal planes and multiple lateral cephalometric angulations. Upon digital measurements over the postoperative photos, the upper – middle – lower facial thirds , the results were compared with the average normal values of Caucasian males and females and were found to be acceptable. A short presentation over the ancient Greek and Da Vinci's Renaissance rules will be mentioned along with a comparison with today's craniofacial proportional values of Tessier.
Conclusions: The functional rehabilitation of patients with dentofacial deformities was always a major aim of Orthognathic surgery. The facial aesthetics though come along with this subject, and it becomes a standard of care for those patients. The long term clinical experience shows that the proper surgical correction brings these patients towards a phenomenal improvement of their aesthetic depiction as the soft tissues tend to follow the hard tissue – movements regarding maxillomandibular corrections.

Keywords: facial aesthetics, orthognathic surgery, facial reconstruction

MAXILLARY DISTRACTION OSTEOGENESIS

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Objectives: Distraction osteogenesis (DO) is a commonly used technique for skeletal expansion of the mandible and frequently reported for midface expansion at the LeFort I and III levels. The purpose of this presentation is to describe new data on the biology of maxillary DO.
Materials and methods: 9 Minipigs underwent bilateral maxillary DO under general anesthesia. A Le Fort I osteotomy was performed and a distractor was fixed across the bone cut. A protocol of 0-day latency, 1 mm/day rate for 12 days and 24 days of fixation was followed. Maxillary specimens were harvested at end-DO (n=3), mid- fixation (n=3) and end fixation (n=3). Regenerate was stained with Hematoxylin/Eosin (H & E) and examined with light and fluorescence microscopy. In total, 216 fluorescence photographs were obtained from each study group. Results. Animals tolerated the procedure well. At end-DO group, more cells were noticed close to the natural bone and in the centre of the regenerate. Fibrous tissue decreased sequentially from the end-DO to the end-fixation groups. By the end of the distraction period there was active proliferation of pro-osteblasts and formation of bone trabeculae in continuation with the edges of the natural bone. Islands of chondrocyte-like cells appeared in one specimen each at mid- and end-fixation. PCNA index and vessel density were higher at the end-DO group compared to mid- fixation and end-fixation groups. Bone formation at the end of fixation period was complete based on clinical, radiographic and histological examination inDO can be all specimens. Fibrous tissue demonstrated strong fluorescence in H&E stained slides.
Conclusion: Despite differences in thickness of bone and morphology, the pattern of healing was similar to that described for the mandible. As in mandibular DO, intramembranous bone formation was the predominant mechanism of healing performed successfully in the maxilla with zero latency.

LYMPHOEPITHELIAL SIALADENITIS (LESA): AN UNCOMMON LESION WITH BENIGN SOLID TUMOR CHARACTERISTICS PRESENTED IN A FIVE-YEAR OLD FEMALE PATIENT. DIAGNOSIS, PROGNOSIS AND TREATMENT

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Objectives: TLymphoepithelial Sialadenitis (LESA) is a quite rare disease occurring either in the parotid or submandibular gland. The lesions are characterized by lymphocytic infiltration which leads to parenchymal atrophy. It is more common between middle aged women and usually related with autoimmune diseases like Sjogren's syndrome(SS). Patients infected with Human Immunodeficiency Virus (HIV), specifically children, are prone to such lesions and LESA tends to be an early manifestation of the infection. Predispotision to Non- Hodgkin's Lymphoma is also mentioned in literature. This study highlights the rarity, the diagnostic complexity of LESA and the prognosis. Moreover it is attempted to demonstrate the therapeutic path provided by our Department.
Materials and Methods: A five year old female patient with a free medical history was presented to the Department of Craniomaxillofacial Surgery complaining for a localised swelling at the front border of the right parotid gland, first presented 10 months ago impairing mouth opening. She was already undergone specific blood exams, Fine-needle Aspiration (FNA), ultrasounds and a MRI. Differential diagnosis included a reactive lymphnode, vascular tumor and autoimmune lymphadenitis. A surgery under general anaesthesia was set. The lesion was excised using a modified Blair's incision under facial nerve monitoring.
Results: Post surgically, temporary paralysis of right facial nerve brands was not observed. The histopathologic examination of the lesion set the diagnosis of Lymphoepithelial Sialadenitis (LESA). An appointment with the Rheumatology Department was scheduled. During the Follow-up there was not any complications observed. However the patient developed a tumor in the left parotid gland after 5 months and a strict follow-up programme was set. No corticosteroids was given due to patient's age.
Conclusions: LESA is a salivary gland disease characterised by lymphoepithelial lesions. Differential diagnosis includes systemic diseases like Sjögren's syndrome, HIV-infection and marginal zone B-cell lymphoma which require further investigation and therapy. An exact diagnosis may be difficult to be obtained. Extraction and histopathologic analysis of the specimen sets the solution to the diagnostic algorithm.

MALT LYMPHOMA IN PAROTID SALIVARY GLAND

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Abstract summary: MALT lymphoma (Mucosa-associated lymphoid tissue lymphoma) is a form of extranodal marginal zone B-cell lymphoma that usually occurs in the gastrointestinal tract (mainly in stomach) but can be seen in other body organs such as lung, breast, ocular adnexa as well salivary glands. Given the fact that initial and solely

presentation of MALT lymphoma in parotid gland is rare and high chances of easily being confused with other soft tissues lesions such as abscesses, sialoceles, epidermal cysts or benign parotid gland tumors a very careful and thorough examination and investigation should be followed for the most appropriate and evidence based treatment to be provided to the patients. We present a case of a 75-yearold man with a 2-month history of painless mass on the left preauricular area which was fairly hard and nontender where the FNA biopsy showed a benign tumor of superficial lobe of the parotid, pleomorphic adenoma, but after the complete excision of the mass the final pathological report showed MALT lymphoma. Patient was referred to Hematology Department to undergo further evidence based therapy.

ADVANCEMENTS IN DIGITAL PLANNING AND SURGICAL TECHNIQUES FOR TOTAL ORAL REHABILITATION: A MULTIDIMENSIONAL APPROACH INTEGRATING PRECISION-GUIDED IMPLANTOLOGY AND ORTHOGNATHIC SURGERY

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Summary: This case series aims to evaluate the efficacy and outcomes of digital planning in two cases. The first case pertains to the use of digitally designed guided implants along with LeFort I osteotomy - as an integrated treatment modality for addressing severe bone loss with skeletal Class III malocclusion. Whereas, the second case pertains to the use of digitally designed custom-made "Maxillo-Zygomatical" titanium implants for rehabilitation of severe maxillary atrophy.
By analyzing the diagnostic processes, digital planning techniques, implantation procedures, and post-operative results, the objective is to assess the clinical benefits and functional improvements achieved through this comprehensive approach. The study intends to provide insights into the role of 3D-guided treatment plan in achieving optimal occlusal stability, aesthetic enhancement, and overall oral rehabilitation in patients with complex skeleto-dental conditions.

PLATELET RICH FIBRIN (PRF) USE IN ORAL AND MAXILLOFACIAL SURGERY

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Objectives: GFinding ways to control inflammation and accelerate the healing process is a significant hurdle in clinical research. Platelet-rich fibrin (PRF) has emerged as a valuable asset in oral and maxillofacial surgery, transforming the field by offering regenerative properties and improved healing capabilities. Currently PRF has found a wide range of clinical applications like bone grafting procedures, soft tissue surgeries, Implantology, preventing and treating Alveolar Osteitis, control temporomandibular joint (TMJ) disorders and treatment of Osteonecrosis of the Jaws. PRF also aids in expediting the healing process and reducing discomfort for patients undergoing aesthetic procedures, facial burns treatment as well as Cleft lip & Palate management. The following study aims to review the use and properties of platelet-rich fibrin (PRF) applied to oral and Maxillofacial surgery, focusing on its preparation and use in clinical applications.
Materials & Methods: Three major medical electronic databases: PubMed, EMBASE and Cochrane Library were used to search for articles evaluating the use and effectiveness of PRF in Oral and maxillofacial surgery procedures.
Results: The studies analyzed showed a beneficial effect of PRF in Oral and Maxillofacial surgery by preventing Alveolar Osteitis and other infections, improving bone and soft tissue handling procedures, increasing implant success likelihood, treating Temporomandibular Joint Disorder symptoms as well as aid in Osteonecrosis of the Jaws prevention.
Conclusions: Numerous studies have explored the advantages of utilizing PRF in Oral and Maxillofacial surgery. The majority of these studies support the use of PRF due to its positive outcomes. Although there is currently no universally accepted PRF protocol, all existing protocols have demonstrated encouraging results. The establishment of standard protocols is crucial in order to determine and validate the surgical indications for PRF usage.

Keywords: PRF, wound healing, facial rejuvenation, Blood concentrates, Growth factors.

COMPREHENSIVE MANAGEMENT OF SEVERE DENTOALVEOLAR TRAUMA FROM CHILDHOOD TO ADULTHOOD: A CASE REPORT

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Objectives: Objectives: To present a case of severe dentoalveolar trauma in a pediatric patient, from the urgent initial treatment and

teeth reimplantation, to implant rehabilitation in adulthood.
Materials and Methods: Patient's clinical records were retrieved, data were collected for the urgent treatment of trauma at the hospital, the additional interventions to preserve injured permanent teeth the long-lasting follow-up and the final restoration with implants when teeth were lost, seven years post-injury.
Results: A 14-year-old girl was referred to hospital emergency room, following a severe dentoalveolar trauma caused by fall. The alveolar mandibular ridge had suffered a comminuted fracture, from left to right permanent canine, with avulsion of all incisors and left canine. The injury included a penetrating soft tissue trauma at the level of the chin-labial groove. Treatment, under general anesthesia, included reduction of the fractured alveolar ridge, reimplantation and immobilization of the teeth, via a flexible splint and soft tissue suturing. Post-operative period was uneventful; further interventions included endodontic treatments and regular follow up. Two years after trauma, teeth #41, #42, #43 showed first signs of resorption, which eventually resulted in their extraction seven years after trauma, with bone regeneration at the same time. Fully guided implant placement at #41 and #43 was performed. In radiographic examination prior to second stage implant exposure, root resorption of teeth #31 and #32 was also noticed; their extraction was followed by immediate placement of a third implant. Temporary restorations were used when teeth were lost and additional soft tissue improvement with free gingival graft was performed prior to the final prosthetic restoration.
Conclusions: Severe dentoalveolar trauma in childhood needs immediate treatment and long-lasting follow-up. In cases of secondary teeth loss due to root resorption, dental implants are the indicated solution, in adulthood.

Keywords: dentialveolar trauma, pediatric patients, implantology, bone regeneration

NON-HODGKIN LYMPHOMA OF LOWER LIP: A RARE CASE REPORT

DOI: 10.54936/haoms242p33

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Objectives: Mucosa associated lymphoid tissue (MALT)/Extra nodal marginal zone lymphoma is a slow growing non-Hodgkin Beta cell lymphoma. It accounts for approximately 7-8% of non- Hodgkin lymphomas and has a predisposition in females older than 50-60 years. It can affect sites such as the stomach or salivary glands. It's commonly associated with autoimmune conditions such as Sjogren's syndrome. This lymphoma generally remains localised and has a low rate of systemic involvement. Treatment is based on the site and stage of the disease. This can involve local therapy; surgery, radiotherapy, or systemic therapy; watch and wait, immunotherapy, chemotherapy.
Material and methods: A 40-year-old, fit and healthy male with no history of smoking was referred to the oral surgery department regarding a 6-month history of a lump on the lower labial mucosa. Clinical examination revealed a 1x1cm raised well defined swelling, soft and mobile in consistency with normal overlying mucosa. Differential diagnosis included mucocele or polyp. After discussion, it was decided to keep under a 3-monthly review. At review, although the clinical appearance remained the same, options were re-discussed, and excisional biopsy was chosen.
Results: Histopathology revealed an extra nodal marginal zone lymphoma. An urgent referral to haematology was completed with request of CT head, neck, chest, abdomen, and pelvis with contrast. CT results were negative. A multi-disciplinary team meeting concluded a watch and wait plan.
Conclusion: MALT lymphomas of the lower lip are rare, with mucoceles common. Following this case, we have adopted a new protocol in the oral surgery department. Lesions which are kept under observation will have clinical photos with ultrasound assessment. Outcome of this rare case was "positive". However, having had the ultrasound we could have diagnosed it sooner. It is important to reiterate to patients that without special investigations a definitive diagnosis cannot be achieved.

Keywords: Non-Hodgkins Lymphoma, MALT Lymphoma, Oral Surgery

UP, UP, AND AWAY; HOW PANTON-VALENTINE LEUKOCIDIN STAPHYLOCOCCUS AUREUS INFECTION GROUNDED A FLIGHT ATTENDANT

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Objectives: To highlight Panton-Valetine Leukocidin positive Staphylococcus Aureus (PVL-SA) as a potential source of infection in severe/recurrent skin infections in fit and healthy individuals. To highlight at risk groups. To demonstrate relevant microbiological investigations. To emphasise the importance of prompt surgical management in PVL-SA cases. To highlight the geographical spread of PVL-SA strains.
Materials and methods: Presenting a case of a severe PVL-SA upper lip infection. Using the case to highlight key learning points for management of PVL-SA patients. A pictorial and descriptive illustration of a patient's journey from emergency referral, admission, surgery, antimicrobial management and follow up in an Oral and Maxillofacial Surgery unit. Using sequential pictures, haematological and biochemical results to demonstrate the patient's clinical progress. Discussing the patient's microbiology results over time and testing pathways for PVL, its limitations, and benefits.
Results: This patient had PVL positive Methicillin-Sensitive Staphylococcus Aureus (MSSA) rather than Methicillin-Resistant Staphylococcus Aureus (MRSA). The patient made a full recovery following prompt surgical intervention and appropriate antibiotic use. The pa-

tients General Practitioner provided appropriate follow-up infection prevention measures.
Conclusion: PVL-SA MSSA subtype is most common in Europe, compared to North America where the MRSA subtype is more prevalent and attributable to the USA300 strain. The Centre for Disease Control and Prevention have outlined 5 C's (Contaminated items, Close contact, Crowding, Cleanliness, Cuts and other Compromised skin infections) as risk factors for PVL-SA. MSSA skin infections where prompt surgical management is provided can significantly reduce the length of stay in hospital. Liaison with microbiology following PVL results may guide antimicrobial selection especially in deep invasive PVL-SA infections for example in children, pneumonias and osteomyelitis cases. PVL-SA skin infections are associated with better prognoses. Clinicians managing severe/recurrent infections should be suspicious of PVL positive staphylococcus aureus as a source of infection- especially in at risk groups and healthy individual.

Keywords: Panton-Valentine Leukocidin positive Staphylococcus Aureus

DEEP-LEARNING SEGMENTATION OF CT AND MR IMAGES: A PRECIOUS DIAGNOSTIC TOOL FOR CRANIOFACIAL LESIONS

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Introduction: RMedical segmentation entails extracting specific regions of interest from three-dimensional image data, such as Magnetic Resonance Imaging (MRI) or Computed Tomography (CT) scans. The primary objective of segmenting this data is to identify anatomical areas that are necessary for a particular study or analysis, such as lesions. The segmentation process encapsulates a wealth of information regarding the properties of the lesion, and harnessing this information effectively can greatly aid in achieving an accurate diagnosis.
Materials and Methods: We have developed a deep learning algorithm that has been introduced to widely accepted maxillofacial and radiographic references. This algorithm has been specifically designed to integrate lesions' information and function as a valuable tool for both differential diagnosis and treatment planning.
The algorithm focuses on lesion properties which includes, Thresholding - Hounsfield unit - Lesion surface/borders and Intralesional properties, Morphological characteristics, Single or Multifocal/Size & Volume, Lesion location, Evaluating the effect on surrounding structure. Moreover, Lesion superimposition – used for lesion follow-up.
Our deep learning algorithm underwent thorough examination and preparation by being trained on a dataset comprising 250 intraosseous lesions (CT) and 150 soft tissue lesions (MRI).
Results: Through the utilization of deep learning, our algorithm has achieved an 87% accuracy in differential diagnosis for maxillofacial lesions. While the accuracy of diagnosis for soft tissue lesion on MRI was 82% the accuracy of CT lesion segmentation-based diagnosis was 90%.
Conclusions: Deep learning algorithm is a decision support tool for the radiological assessment images of craniofacial lesions. This emerging tool allows us to expedite the interpretation process and enhancing workflow efficiency leading to improved clinical outcomes. Furthermore, it enhances accuracy and minimizes inconsistencies among different readers.

ARE WE ADEQUATELY ASSESSING AND RECORDING SAFEGUARDING CONCERNS FOR PAEDIATRIC PATIENTS SEEN IN THE ACCIDENT & EMERGENCY DEPARTMENT (A&E) OR ADMITTED BY ORAL & MAXILLOFACIAL SURGERY (OMFS)?

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Background/Introduction: Safeguarding children is a core duty of all healthcare professionals. The A&E department in Worcestershire Royal Hospital have history sheets available containing a safeguarding proforma in a tick-box form, which should be completed and signed.
Aims & Objectives: To assess if we are adequately screening for and documenting safeguarding concerns in children presenting at A&E or being admitted by OMFS.
Methodology: National and local guidelines were reviewed to establish standards for documentation. A retrospective audit of all paediatric patients seen in A&E in 2020 was completed using an Excel data collection tool.
Results: The audit covered 226 patients under the age of 18 seen in A&E by OMFS and 38 patients admitted under OMFS in 2020. The majority of the safeguarding checklist tick boxes were not completed. Data showed good compliance with recording the social situation of the child. There was low compliance with documentation of other signs indicating non-accidental injury e.g. history inconsistent with injury, unexplained injuries and the behaviour of the child.
Discussion/Conclusions: The safeguarding proforma is quick and easy to complete while covering the necessary screening questions. Clinicians should consider non-accidental injury for all paediatric facial injuries presenting at A&E. Completing the proforma ensures there is evidence that the child has been properly assessed for safeguarding concerns. Any concerns should be discussed immediately with the on-call OMFS/Paediatric consultant.

A BUCCAL HEMATOMA: HOW A DENTAL LOCAL ANESTHESIA ENDS UP IN THE INTENSIVE CARE UNIT

DOI: 10.54936/haoms242p37

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Objectives: The local anaesthesia of the maxilla for dental procedures, can accidentally cause a hematoma, if the needle traumatizes vessels and cause extravasation of the blood in soft tissues. In our case, the patient had an active and expanding hematoma, which required immediate surgical treatment under general anaesthesia and intensive care unit (ICU) hospitalization. The aim of our case report is to present the possibility how a usual private dental practice could even end up in the ICU, as also as a literature review of similar cases.
Materials and Methods: A 63-year-old male was referred to the emergency department (ED) of our hospital due to an acute growing right buccal swelling, after he received a local anaesthetic for root canal therapy. After a physical and CT examination, an active, enlarging, and expanding buccal hematoma was revealed. The decision of urgent surgical treatment under general anaesthesia was taken undoubtedly, multiple blood clots were removed, and two arterial branches were ligated. The patient was transferred to the intensive care unit (ICU) to ensure regular post-operative hemodynamic stability and airway protection.
Results: The second post-operative day, the patient was decannulated and continued his hospitalization in the clinic and had an uneventful post-operative course. A medical investigation of coagulation functions was performed, without revealing any anomaly.
Conclusion: An acute active hematoma of the head and neck spaces without coagulation/platelet dysfunction is a rare modality. A simple dental injection could end up in such a situation. If the hematoma is active and no preservative treatment succeeds, we must not underestimate the necessity of an immediate surgical treatment under general anaesthesia. Close observation of these patients is mandatory.

A POSTOPERATIVE NEUROSURGICAL TRISMUS - A CASE REPORT AND A LITERATURE REVIEW

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Objectives: The permanent trismus due to a myositis ossificans is a clinical situation that appears due to a spectrum of reasons. One of them is the postoperative trauma, that seems to be usual after a mandibular wisdom tooth extraction. According to the literature data, a neurosurgical postoperative permanent trismus seems to be unexpectedly rare, and our case report seems to be the second one to be added in the literature.
Materials and Methods: A 45-years-old male, was reffered to University Oral and Maxillofacial Clinic, due to a neurosurgical postoperative permanent trismus. A CT scan of the patient revealed a calcificated tissue just above and in touch with the right zygomatic arch, which was blocking the coronoid process during the mouth opening. The patient underwent a surgery of a coronoidectomy, as also, a partial zygomatic arch and calcificated tissue en bloc resection, as well.
Results: The histology report confirmed a myositis ossificans. The patient has an uneventful follow up since his surgical restoration of his mouth opening.
Conclusion: The surgical treatment of a permanent postoperative trismus due to myositis ossificans is the gold standard. According to the literature data, our case report strongly constitutes a significant addition to it. After bibliographic research, a neurosurgical postoperative trismus appears in terms of a case report only once.

A FIRST BRANCHIAL CLEFT FISTULA: A CASE REPORT AND LITERATURE REVIEW

DOI: 10.54936/haoms242p39

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Objectives: The first branchial cleft fistula is a congenital developmental disorder, arising from the first branchial arch, and is located just in front of the pinna up to the upper neck extremities. The Work classification of type II refers to the fistula that involves parotid tissue. The aim of this case report is to confirm the rarity of the condition, to compare it with the current literature data, as less than 10 articles are reported in the literature.
Materials and Methods: A 47-year-old male patient was was referred to University Oral and Maxillofacial Surgery Department, due to a long term, since childhood, recurrent preauricular and neck skin infections. A CT syringography revealed a fistula starting from the external auditory canal ,through the parotid tissue, and ending in submandibular skin region. It was decided the fistula to be excised under general anesthesia, and partial parotidectomy was performed. The result of the histological examination concluded to a branchial tissue.
Results: The patient so far by now has an uneventful postoperative follow up, and no infectious relapse occurred, so that a permanent solution was gave to a perennial lesion surgically.
Conclusion: According to the literature, first branchial cleft fistula is a trully rare medical condition. The diagnosis, the imaging processes, the surgical treatment, is not as usual as in other infectious conditions. The rarity of this congenital disease is confirmed by cross-checking the literature data, so that this case report adds important information to the existing data.

NOVEL MINIMALLY-INVASIVE TECHNIQUES FOR ALVEOLAR RIDGE PRESERVATION AND RECONSTRUCTION OF THE PERI-IMPLANT SUPRACREST-

AL COMPLEX. A LITERATURE REVIEW AND CASE SERIES

DOI: 10.54936/haoms242p41

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Background and Aim: Tooth extraction affects causes homeostatic and structural changes in periodontal tissues, leading to alveolar ridge atrophy. Alveolar ridge preservation (ARP) is carried out to avoid ridge resorption after a extraction. There is a general agreement that implants can be placed six months after ARP, following a delayed placement procedure. However, there was no convincing evidence that ARP would improve implant or prosthodontic success. It is still not clear which ARP technique provides more predictable results and it is still premature to draw any conclusions with regard to the surgical technique, namely the need for primary closure. The aim of this presentation is to present clinical cases illustrating socket preservation using a novel synthetic bone graft, and techniques for the reconstruction of the peri-implant soft tissue.
Methods and Materials: In a series of clinical cases, a minimally invasive open-healing approach was followed for ARP, using a synthetic silicate substituted b-TCP injectable bone graft. At the time of implant placement, the clinical and radiographic results were evaluated, and bone trephine biopsies were harvested for histological analysis of the regenerated hard tissues.
Results: In all cases, the clinical, radiological and histological results revealed that the silicate substituted b-TCP bone substitute promoted the regeneration of high-quality bone in the extraction sites, allowing the delayed prosthetically-driven implant placement in the correct 3D position. The use of the anatomical healing abutments resulted in the successful reconstruction of the peri-implant soft tissues, establishing a healthy biological peri-implant phenotype.
Conclusions: The methods mentioned above can be used to provide adequate bone preservation both horizontally and vertically, considering the needs of each patient and cost-bearing capability. Customised anatomical healing abutments, especially when used at the time of implant placement, can help clinicians create the correct anatomy of the peri-implant soft tissues and a proper soft-tissue seal at the implant supracrestal complex. The final result is the delivery of implant restorations with proper design, promoting long-term stability and limiting the risk of peri-implantitis.

FACE OR OCCLUSION

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Objective: The aim is to present three patients that were treated orthodontically in a nice Class I occlusion. However, the face and the skeletal discrepancy were overlooked by the orthodontist and they eventually returned to our clinic after the completion of the orthodontic treatment, complaining about the aesthetic outcome.
Methods and Materials: All three patients received a secondary treatment including maxillofacial surgery. The new treatment focused not only on the occlusion but also the face. Comparison of pre-treatment and post-treatment records including lateral cephalometric radiographs were used.
Results: Comparison of the records shows significant improvement of facial aesthetics in all three planes. A stable Class I occlusion was also obtained. Symptoms of obstructive sleep apnea were also resolved in one of the patients who was presented with a severe mandibular retrognathism.
Conclusion: This presentation illustrates clearly the failure of the orthodontist to understand the real chief complaint of the patients and the inability to present to the patient the option of the surgical correction, either due to lack of experience and knowledge or personal beliefs regarding surgical orthodontic approach. Emphasis is given on the cooperation between the orthodontist and the oral and maxillofacial surgeon which is of utmost importance in such surgical cases.

ACCURACY OF A 3D FACIAL SOFT TISSUE PREDICTION

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Introduction: Dentofacial deformities can have a negative impact on quality of life, self-image, social behaviour and public perception. A combination of orthodontics and orthognathic surgery can correct functional abnormalities and improve facial esthetics. In the past, prior surgery, various two-dimensional (2D) methods have been used to assess a three-dimensional face planification. Nowadays, obtaining a 3D facial image of the patient prior to surgery is essential for accurate evaluation of facial aesthetics.
Aim: Establish the accuracy of the 3D facial soft tissue prediction model compared to the 3D facial soft tissue result of patients who underwent orthognathic surgery.
Methods: Twenty-six patients who needed orthognathic surgery underwent Vectra H1 three-dimensional stereophotogrammetry face imaging. A 3D prediction model was made prior to surgery during the planification phase. In order to obtain each patient's final soft tissue

profile six months following surgery, the patients were asked to repeat the 3D stereophotogrammetry procedure. At last, the 3D final model of each patient was contrasted with his/her 3D prediction model.
Results: Specific reference points were measured in each 3D model by the same operator in order to avoid bias. The following reference points were measured: distance of subnasale-stomion, stomion-menton, lower nose width, facial thirds, upper and lower lip to nasomental line, nasofacial angle, nasolabial angle, nasomental angle, nasocervical angle, mentocervical angle. It was shown that the final 3D model and the 3D prediction model were remarkably comparable.
Discussion: We can draw the conclusion that the soft tissue profile prediction model is a useful tool before undergoing orthognathic surgery based on the study's findings.

PRIMARY SOFT TISSUE SARCOMAS OF THE CRANIOFACIAL AREA: A CASE SERIES AND A REVIEW OF LITERATURE

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Objectives: TSoft tissue sarcomas of craniofacial area constitute very rare malignancies with histological and clinical diversity. This study aims to present our clinical experience on craniofacial soft tissue sarcomas in pre-COVID and post-COVID era. A literature review is also conducted with emphasis to epidemiology, diagnosis, treatment and prognosis.
Materials and Methods: We reviewed the cases of 7 patients with craniofacial soft tissue sarcomas that were treated in our Clinic the period 2012-2022. We registered the following information: sarcoma type, diagnostic criteria, disease status at presentation, treatment, outcome and differences in pre- and post-covid era.
Results: There were 6 men and 1 woman with a median age of 56. These cases included: 1 scalp pleiomorphic sarcoma, 1 parotid gland liposarcoma, 1 supraorbital myofibroblastic sarcoma, 1 paranasal Malignant Peripheral Nerve Sheath Tumor, 1 paranasal synovial sarcoma, 1 paranasal angiosarcoma and 1 dermatofibrosarcoma. The diagnosis was histological in all cases. Most cases presented with AJCC stage II disease. Treatment was multidisciplinary. Extensive surgical excision was used in all cases, except 1 due to patient' s denial. Surgical margins were microscopically positive in 3 patients. Induction chemotherapy was used in the case of MPNST and postoperative chemoradiotherapy in the case of dermatofibrosarcoma. At last follow up 3 patients were alive without disease, 1 patient had multiple recurrences and 3 died of their disease.
There was an observable rise of incidence of sarcomas on post-COVID era and a more aggressive tumor behavior compared to pre-COVID era. Furthermore, the sarcomas/total malignancies ratio has also increased: during pre-COVID era it was 1,14% while during post-COVID era it was 8,62%.
Conclusions: Besides the evolution in diagnostics, imaging, chemotherapy and surgery, treating craniofacial sarcomas can be really challenging. The prognosis is still poor. More studies and further investigation, with a reliable number of cases, need to be carried out in order to shed light to the overall treatment strategy considering the anatomy and the proximity with vital structures.

IMPLANT-BASED DENTAL REHABILITATION IN EXTREME MANDIBULAR RECONSTRUCTION CASES

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Abstract: Reconstruction of oromandibular defects poses numerous challenges. The most common mandibular defects occur secondary to oncological ablative surgery, namely, following a segmental resection or a hemi-mandibulectomy. Advances in microvascular surgery, implantology and computer sciences, with the ability to produce patient-specific reconstructions, have offered significant improvements in the anatomical and functional restoration of such defects. Current state-of-the-art mandibular reconstruction is based on computer-aided technology for preoperative virtual planning of the mandibular and donor site osteotomies, manufacturing of corresponding guides and fixation hardware in a 'three-in-one' concept. The aim of this oral presentation is to highlight the differences and challenges in adult and paediatric mandibular reconstructions and dental rehabilitation through the presentation of two unique cases.
In the first case, the mandibular reconstruction was performed using a prefabricated and Integra®-prelaminated vascularized fibula free flap. The dermal substitute Integra® was used for prelamination instead of a skin graft. The treatment was performed in two stages: the first consisted of fibula prefabrication (dental implant insertion) and prelamination, and the second consisted of tumor resection and reconstruction with the vascularized implant-bearing fibula flap. Integra® was shown to be able to generate complete mucosa-like tissue over the fibula flaps and in the peri-implant areas. Virtual three-dimensional (3D) planning and 3D-printed cutting guides were used for the mandibulectomies, the flap harvest and the positioning of the implants.
In the second case, a 13-year-old female was treated in a two-stage surgery. The first stage consisted of resection and reconstruction of the mandibular defect using a fibula free flap. The second stage – three years later – involved the implant placement and later dental rehabilitation.

CLINICAL AND MORPHOLOGICAL ASSESSMENT OF FLAP INNERVATION RESTORATION AFTER ORAL CAVITY RECONSTRUCTION IN ONCOLOGICAL PATIENTS

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Introduction: The priority in the oral cavity reconstruction after radical surgical treatment for malignant tumors is restoration of vital functions such as swallowing, speech, protection of the respiratory tract from aspiration and maintenance of normal intraoral sensation.
Purpose: To determine the benefits of innervated autografts usage for sensory recovery in reconstructed organs.
Materials and methods: This study was performed prospectively on 62 patients with oral cavity malignant tumors who underwent radical surgical resection. 32 patients were included in experimental group, in which reconstruction was performed using innervated flaps, and 30 were in control group without innervation. The sensory recovery was evaluated by following subjective methods: pain, warm and cold senses, the Weber test, the Semmens-Weinstein test and a survey. For morphologic evaluation of nerve fibers in autografts tissue, a biopsy was performed followed by immunohistochemical (IHC) staining with S100 and NF markers. Each section from each sample was studied for the presence and number of nerve fibers. StatTech v.3.0.9 program was used for statistical calculations.
Results: Statistically significant differences were found in favor of the experimental group in assessing of cold and warm senses - 90.6% (29) vs. 66.7% (20) ($p = 0.029$); in assessing acute pain - 78.1% (25) vs. 33.3% (10) ($p < 0.001$); in Semmens-Weinstein test - 71.9% (23) versus 36.7% (11) ($p = 0.005$); in two point discriminations following results were observed: at distance less than 5 mm - 12.5% (4) versus 0%, at distance from 5 to 10 mm - 34.4% (11) versus 6.7% (2), at distance more than 10 mm - 53.1% (17) versus 93.3% (28). By IHC staining, the differences in nerve fiber presents were not statistically significant ($p=0.078$). However, the median rate of number of the nerve fibers in innervated flaps group were Me=3 (Q1- 0; Q3-5), while in non-innervated flaps group Me=0 (Q1-0; Q3-1), ($p=0.005$).
Conclusions: Statistically significant differences were obtained, confirming that innervated flaps are superior to non-innervated flaps in terms of restoration of sensitivity and the number of nerve fibers.

Keywords: innervated flaps, sensation recovery, functional reconstruction, oral cancers.

SMAS FLAP FOR EXTRACAPSULAR DISSECTION OF PAROTID GLAND TUMORS: IS IT NECESSARY?

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Abstract Purpose: The aim of this retrospective article is to evaluate postoperative outcomes after extracapsular dissection for small benign superficial parotid neoplasms (<3 cm) in patients who received superficial musculoaponeurotic system (SMAS) flap and in patients who did not receive it.
Case presentation: A multi-institutional retrospective study is presented. All patients who presented for evaluation and management of benign tumours of the parotid gland between 2004 and 2008 were eligible for study enrolment. For being enrolled in this study, patients had to meet the following inclusion criteria:
- diagnosis of benign parotid tumour.
- extracapsular dissection performed.
- complete clinical preoperative and postoperative documentation.
- no previous parotid surgeries.
- SMAS flap reconstruction for group 1 and no SMAS flap reconstruction for group 2.

Keywords: SMAS flap; Frey syndrome; Auriculotemporal nerve syndrome; Parotid tumor; Extracapsular dissection; Superficial parotidectomy

EVOLUTIONARY PROCESS OF THE ORAL CANCER: CORRELATION OF THE INFLAMMATORY MARKERS IN THE PERIPHERAL BLOOD WITH THE PRESENCE OF THE LYMPHOCYTE POPULATION IN THE NEOPLASTIC TISSUE

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Objectives: This study aims to evaluate the relationship between systemic inflammation and the presence and stage of oral cancer development. The evaluation will be performed using a prospective analysis of 80 patients diagnosed with oral cancer between 2022 and 2025. The study combines both markers of inflammation in the peripheral blood and data of the lymphocyte identity in neoplastic tissue.
Materials and Methods: The inflammation markers tested include the total white blood cell (WBC) count and its ratio to neutrophils (NLR/WBC), monocytes (LMR/WBC) and platelets (PLR/WBC). In

addition, C- reactive protein (CRP) and erythrocyte sedimentation rate (ESR) levels will be recorded. Immunohistochemistry will be performed on the neoplastic tissue to determine the presence of CD4+ and CD8+ tumor-infiltrating lymphocytes (TILs).
Results: Preliminary findings reveal that elevated NLR and PLR ratios in peripheral blood, as well as high levels of CRP and ESR, are strongly associated with advanced stages of oral cancer, indicating faster progression and increased likelihood of recurrence. Conversely, higher levels of LMR in blood and CD4+ and CD8+ TILs in cancer tissue are often associated with a more favorable prognosis. In addition, a decrease in NLR and PLR values is expected after cancer treatment. These findings will correlate to a tumor stage, according to TNM system.
Conclusion: In conclusion, the present study will shed light on the association between systemic inflammatory response and oral squamous cell carcinoma (OSCC), establishing a clear association between elevated peripheral blood inflammatory markers and advanced stages of cancer. In addition, we will investigate the infiltration of CD4+ and CD8+ TILs into neoplastic tissue to assess the host immune response to the tumor. These insights will contribute to a better understanding of the overall cancer development process and help to evaluate the overall therapeutic response.

Keywords: Oral cancer, Inflammation markers, TILS

COMPLICATION MANAGEMENT IN MAJOR ABLATIVE AND RECONSTRUCTIVE HEAD AND NECK SURGERY: OUR EXPERIENCE

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Introduction: This study aimed to evaluate the management of complications in major ablative and reconstructive head and neck surgeries conducted at a single institution over a six-year period. The prevalence of squamous cell carcinoma and advanced disease stages in the patient population necessitated meticulous postoperative care and monitoring. The utilization of the Clavien-Dindo classification system in understanding and effectively managing complications was emphasized.
Methods: A retrospective analysis was conducted on 26 patients (13 males and 13 females) who underwent major ablative and reconstructive head and neck surgery between 2017 and 2022. The mean age of the patients was 58 years, ranging from 20 to 81. The majority of cases involved new cancer diagnoses, primarily squamous cell carcinomas affecting various head and neck sites. Notably, eight patients had significant comorbidities.
Results: Reconstructive procedures involved the use of different types of flaps, including anterolateral thigh flaps, fibula flaps, gracilis flaps, and radial free flaps. The average length of hospital stay was 16.9 days, while the mean length of stay in the enhanced recovery program was 3.65 days. Complications were assessed using the Clavien-Dindo classification system. Five patients experienced no complications, while the remaining patients had varying degrees of complications. Grade III complications were observed in seven patients, grade IV complications in three patients, and grade V complications in three patients. Additionally, 9 patients succumbed to the disease, and 19 patients required adjuvant treatment.
Conclusion: This study underscores the challenges associated with major ablative and reconstructive head and neck surgeries, emphasizing the importance of diligent postoperative care and monitoring. The utilization of the Clavien-Dindo classification system allows for standardized assessment and management of complications. However, further research is warranted to enhance surgical techniques and postoperative care strategies in major head and neck surgery.

Keywords: Head and neck surgery, Complication management, Squamous cell carcinoma, Clavien- Dindo classification, postoperative care

BRANCHIAL CLEFT ANOMALIES: A PICTORIAL REVIEW

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Introduction: The branchial arches constitute the embryological precursors of the face, neck and pharynx. Branchial cleft anomalies result from incomplete involution of the branchial apparatus and may present as cysts, sinuses, fistulae or cartilaginous remnants. These represent the second most common head and neck lesions in children, with the second cleft anomalies representing 95% of the cases, and anomalies derived from first, third and fourth clefts being rare.
Objectives: The purpose of this work is to conduct a pictorial review of a series of clinical cases diagnosed with branchial cleft anomalies, along with a review of the literature.
Materials and Methods: A review on embryological development, clinical presentation, imaging and management of branchial cleft anomalies is presented with a case series of imaging findings.
Results: Branchial cleft anomalies are present at birth and usually manifest in childhood, although it may only later become noticeable or symptomatic. These lesions can present as cysts and may be diagnosed incidentally or mistaken for other neck lesions. Sinus tracts communicate to either the skin or pharynx, being its punctum visible on the skin or internally by endoscopy. Branchial cleft fistulae connect the pharynx with the external skin. The most common anomalies are second cleft cysts that frequently manifest as a fluctuant lateral cervical mass anterior to the sternocleidomastoid muscle. Diagnostic workup includes an imaging exam such as CT or MRI, which allows appropriate characterization of the lesion and aids in surgical excision planning. Even though there are no specific imaging findings, there are typical locations that make this diagnosis extremely likely. Surgical excision is the treatment of choice and complete removal is crucial to prevent further growth and recurrence.

Conclusion: A high suspicion for branchial arch anomalies is important for proper diagnosis. Evaluation through imaging is essential for precise characterization and thereby complete surgical excision, which correlates to a good outcome.

Keywords: Branchial Arches, Branchial Cleft Anomalies, Cysts, Sinus, Fistulae

COMPARE OF VARIOUS MATERIAL INDIVIDUAL SCAFFOLDS FOR ALVEOLAR BONE AUGMENTATION

DOI: 10.54936/haoms242p51

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Objectives: In order to achieve adequate functional and esthetic outcomes, an optimal 3D implant position has to be assured. In some cases, the residual bone width, height and ridge contour are not sufficient for optimal implant placement. The use of scaffolds in terms of guided bone regeneration is a widespread procedur. The main disadvantage of prefabricated titanium scaffolds is the intraoperative manual trimming according to the individual defect size of the patient. CAD/CAM technology can be used to create individual product for each patient and take into account all the anatomical features of the defect area, using various materials such as titanium and biodegradable ones.
Materals and Methods: There were 60 patients in the study. All patients had vertical or/ and horizontal defects in the upper or lower jaw and were candidates for bone grafting procedure. Using DICOM files and open-sourse programs (3D slicer, autodesk maya etc), the individual scaffols were designed and printed before the surgery. Using itterbium laser processing, a special antibacterial coating can be obtained on the membranes. Results Of the 60 defect regions to be augmented, 22 were located in the maxilla and 38 in the mandible. In 10 cases out of 60, the membrane exposure were indicated. Thanks to the homogeneous (without perforations) structure of the membrane, in 8 cases out of 10 there was no need to remove the product and bone regeneration was successful.
Conclusion: This method provides improved management to facilitate successful surgical augmentation of the jaw bones and provides sufficient quality to improve regeneration of bone defects. Titanium scaffolds offer a simplified handling, a removal option to keep the augmented bone in place together with reduced handling time, while biodegradable ones eliminate additional surgery. Further studies are needed to evaluate the effects and benefits of individual scaffolds of various materials.

VALIDATION AND CLINICAL APPLICATIONS OF A PORTABLE DIGITAL STEREOPHOTOGRAMMETRY DEVICE FOR 3D FACIAL IMAGING

DOI: 10.54936/haoms242p52

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Introduction: To present the findings of laboratory testing, our imaging protocol and our clinical experience over a 10 year period of using two generations of a portable digital stereophotogrammetry 3D facial imaging device in maxillofacial applications.
Materials and Methods: Laboratory validation of a portable, single camera digital stereophotogrammetry device (Vectra H1, Canfield 3D, USA) was carried out to assess its accuracy and precision of imaging anatomical models of the face in ideal conditions. Further laboratory testing was carried out to develop a clinical imaging protocol aiming to minimize imaging and registration errors and ensure comparable results. The portable device was then compared to more expensive, fixed imaging systems utilizing multi-camera setups. Clinical cases are presented to demonstrate how the device can be used for virtual planning and soft tissue simulation in orthognathic surgery, cosmetic facial procedures and prosthodontic procedures.
Results: Mean surface imaging error during laboratory validation of the Vectra H1 was below 1mm at 95% and below 0.5mm at 74% of the measured points comprising the surface areas captured. Mean surface deviations in repeatability testing were below 0.1mm.
The 3D data acquired with Vectra H1 were comparable in terms of accuracy of surface reproduction and repeatability to data acquired with fixed multi-camera facial imaging systems (3dMDFace, 3dMD LLC, USA and Di3D, Dimensional Imaging, UK). However, data processing took longer due to the need to align, register and merge multiple images when using the portable Vectra H1 device to capture the whole face. Clinical application of the 2nd generation of the portable device (Vectra H2) in daily practice assists in virtual surgical planning, monitoring and comparisons between pre-operative and post-operative data, record keeping, patient consultations and consent procedures.
Conclusions: The portable 3D digital stereophotogrammetry device can be used in maxillofacial applications instead of more expensive and bulkier multi-camera imaging systems.

Keywords: 3D facial imaging, face scanner, digital stereophotogrammetry, Vectra 3D

EXPLORING THE TREATMENT MODALITIES FOR CUTANEOUS MELANOMA; A NETWORK META- ANALYSIS

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Objective: This Bayesian network meta-analysis aimed to determine the most effective therapeutic option for cutaneous melanoma.
Materials and Methods: A systematic search was conducted in PubMed, Embase, Cochrane Library, and the American Society of Clinical Oncology databases from inception until August 20th, 2018. Among 872 identified records, six met the inclusion criteria and were included in the meta-analysis. A total of 4,244 patients from six randomized studies were included. Adjusted hazard ratios (HRs) for Recurrence Free Survival (RFS), Overall Survival (OS), and relative odds ratios (ORs) for adverse events (AEs) were calculated. Surface under the cumulative ranking (SUCRA) probabilities were computed after data visualization. The therapies considered in the selected studies were combined dabrafenib and trametinib, vemurafenib, nivolumab, ipilimumab, and pembrolizumab.
Results: Nivolumab had the highest probability (75.1%) of being the most effective in terms of RFS, followed by dabrafenib+trametinib, pembrolizumab, ipilimumab, and vemurafenib. However, OS could not be estimated. Regarding AEs, pembrolizumab and nivolumab showed the highest probability of being associated with fewer and less severe AEs (83.1% and 64.4% respectively).
Conclusions: In conclusion, the effectiveness of new drugs in the adjuvant therapy of cutaneous melanoma is noteworthy. However, individualized therapy remains the optimal choice.

CONGENITAL CYSTIC NECK LESIONS: A SINGLE-CENTRE STUDY

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Objectives: Congenital cystic neck lesions comprise an uncommon group of lesions that are usually encountered during infancy and childhood. The prevalence of these lesions varies from common (thyroglossal duct cysts, branchial cleft cysts, and cystic hygromas) to very rare entities (thymic and cervical bronchogenic cysts). Accurate prevalence remains unknown. Thyroglossal duct cysts (TGDC) are the most common lesions found in the midline of the neck, in approximately 7% of the population, usually in children. Mainly they present as a mobile, non-tender swelling, usually inferiorly to the hyoid bone (~75%of patients) .Pain can be associated with local inflammation. The treatment of choice for TGDC is the Sistrunk procedure, ensuring removal of the full length of the duct remnants by including the midportion of the hyoid bone.
Materials and Methods: The aim of this paper is to present the Department's experience treating patients with congenital cystic neck lesions in the last 3.5-year time span (9/2019-6/2023).
Results: The patients were five males (83,3%) (mean age 50.5 years, range 36-71years) and a (16,7%) 63-year-old female. All patients presented with a mobile painless neck swelling and they had normal thyroid function. All patients underwent surgical excision of the thyroglossal cyst including the midportion of hyoid bone (Sistrunk procedure). No complications or recurrences noted to date.
Conclusion: Congenital cystic neck lesions, although rare in adults, as they are typically diagnosed and treated in early childhood, can be intricated with inflammation. Surgical resection and histological confirmation are required.

Keywords: Congenital cystic neck lesions, thyroglossal duct cyst (TGDC), surgical excision

CONGENITAL MIDLINE CERVICAL CLEFT: STUDY OF TWO CASES

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Background: Midline cervical cleft (MCC) is a rare congenital developmental defect of the anterior neck of unclear etiology; however, an impaired fusion of the distal branchial arches in the midline is the most commonly accepted theory. It is usually presented in the neonatal period as usually as scarlike skin defect or cord-like contractive abnormality of the skin at the ventral neck and it is often linked to developmental defects such as cysts, bifid mandible and micrognathia as well as possible loss of the structures of hyoid bone. (MCC is an uncommon malformation of the anterior neck with unknown embryologic development. Until 2014 only 205 cases were reported).
Case presentation: Two cases of a congenital midline cervical cleft of a 2-year-old and of a 5-year-old Caucasian boy were presented in our craniofacial clinic. In the first case the anatomical limits of the lesion were from height of the isthmus of the thyroid to the base of tongue whereas in the second case the lesion was outlined as a cystic focus anterior to the upper aspect of the manubrium of the sternum without a sinus tract. There was no family history of clefts in both cases as well as normal vaginal delivery.
Discussion: In this report we will present the surgical treatment plan, focusing on preoperative and postoperative sequence. The surgical excision was performed with a double-Z plasty in order to achieve aesthetic and functional outcome.
Conclusion: Midline cervical cleft can be diagnosed by a pediatrician,

an oral and maxillofacial surgeon, an orthodontist, an ENT or a plastic surgeon.
It is critical to get a diagnosis and treatment as soon as possible to reduce the likelihood of additional mandibular defects.

CAN A 3D VIRTUAL IMAGING MODEL PREDICT EAGLE SYNDROME?

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Abstract: Eagle Syndrome is an underestimated syndrome with broad and often unspecific signs and symptoms. Both the neuropathic and vascular patterns need a thorough investigation in terms of all their clinical and radiological aspects. A positional/dynamic study is mandatory in the case of suspicion of Eagle Syndrome due to the strong influence of head and neck positions. This work aims to propose a new virtual technique able to predict conflicts between the styloid process and neck vascular structures.

Keywords: Eagle Syndrome; 3D model; artificial intelligence; virtual imaging; CTA; simulation

TRIPLE-FAT GRAFTING TECHNIQUE: A MULTILAYER APPROACH TO FACIAL CUTANEOUS SCLEROSIS

DOI: 10.54936/haoms242p57

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Objectives: Systemic sclerosis (SSc) is a heterogeneous, chronic connective tissue disease, characterized by skin fibrosis, vascular and visceral lesions. Two subtypes with cutaneous involvement have been described: limited and diffuse cutaneous disease. In both of them the face is frequently affected, with related aesthetic and functional disorders. The aim of our study is to propose an innovative protocol for the treatment of skin sclerosis based on the simultaneous use of autologous fat grafts processed with three different methods: Macrofat, Microfat and Nanofat.
Materials and Methods: The study design was based on a technical note as the following protocol: The procedure was performed under general anesthesia and the donor site was the abdomen. Three different modality to process the harvested fat were performed:Macrofat was used to restore the volume of the lip and perioral rim and zygomatic area injecting with a 18 gauge cannula. Microfat was placed to improve the nasolabial folds and the cheeckbone area through a 20 gauge cannula. Nanofat was injected superficially in the perioral wrinkles and in the vermilion border using a 27 gauge needle.
Results: Macrofat was infiltrated for its volumizing effect. Microfat has been exploited for its regenerative and filling action and the biorevitalizing effect of nanofat improved perioral wrinkles and the motility of the lips increasing the mouth opening. The high number of mesenchymal stem cells (ASCs) obtained with this technique represent the major advantage compared to any other body tissue graft. The limit of the procedure is represented by the survival time of the grafted fat, due to the reabsorption of the adipose tissue
Conclusion: In conclusion this surgical technique resulted in a greater elasticity of the skin tissue, a smoothing of the perioral wrinkles with an improvement in microstomy, drooling and fatigue. To achieve the ideal volume, repeated injections are indicated.

Keywords: Systemic sclerosis, Facial Sclerosis, Lipofilling, Fat graft, Microfat, Nanofat

CONDENSED ADIPOSE TISSUES MEMBRANE AS POTENTIAL IMPLANTS FOR SOFT TISSUE REGENERATION

DOI: 10.54936/haoms242p58

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Background: Tissue engineering, aimed at producing fully functional tissue replacements, has provided promising alternatives for regenerating soft and hard tissue defects. Adipose tissues, which are abundant in the body, are readily accessible through liposuction or from the buccal or abdominal fat pads. These tissues are an excellent source of mesenchymal stromal cells (MSCs) and growth factors. Yet, extensive clinical use of these tissue sources as biological tissue grafts has yet to be reported. We have recently developed a novel technique to prepare adipose-derived membranes with tissue regeneration potential, able to withstand mechanical forces, and undergo tissue integration after implantation.
Methods: Adipose tissues were harvested from 350-400 gr rats and from healthy human subjects undergoing abdominoplasty and processed using a prototype apparatus for adipose tissue condensation. Condensed adipose tissue membranes from rats were used for a soft tissue implantation model. condensed adipose tissues from humans were tested for their mechanical properties, cellular sprouting and presence of MSCs. Condensed tissues were compared to uncondensed controls
Results: In vivo implantation of rat membranes indicated rapid perfusion and integration of condensed membranes opposed to uncondensed controls. Condensed membranes from human specimens exhibited superior mechanical characteristics and cellular sprouting, later

characterized as stromal cells able to undergo differentiation toward adipose and osteogenic lineages. Preliminary randomized clinical trials of a human Buccal fat pad have demonstrated significant superiority of soft tissue healing.
Discussion: Preliminary results indicated that a rat in vivo model can be used to assess the contribution of adipose tissue condensation to defect bridging and remolding. Moreover, results from human specimens indicate the possibility of clinical translation.

MEDICATION-RELATED OSTEONECROSIS OF THE JAWS. A SINGLE-CENTRE RETROSPECTIVE STUDY

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Abstract: Objectives: Medication-related osteonecrosis of the jaws (MRONJ) is a serious complication of bone antiresorptive and other targeted treatment. The aim of this study is to elucidate the results of prompt surgical intervention in patients presenting with MRONJ.
Materials and Methods: In this retrospective cohort study patients with MRONJ treated in a 10-year period in a single centre were included. Demographic parameters, co-morbidities, antiresorptive treatments, stage of osteonecrosis and the surgical treatment were recorded.
Results: A total of 168 patients with a mean age of 68.5 years and a female predominance (58.3%) were included in the study. Precipitating factors of osteonecrosis, as dental trauma was recorded and represented a 72.2%. The surgical therapy included debridement or/and extensive removal of necrotic bone either from maxilla or the mandible and applied in all patients irrespectively of the staging. The distribution of MRONJ staging in the sample was 19.1% patients in stage I, 59.2% patients in stage II and 21.7% patients in stage III. Closure of the surgical defect performed in all the cases with mucoperiosteal flap and in selected cases with local flaps. Second operation was required in 20.1% of the patients.
Conclusions: The surgical of MRONJ appears to be moderately successful in a high percentage of patients, yielding complete healing or sub-staging of osteonecrosis.

CAN DECALCIFIED FREEZE-DRIED BONE ALLOGRAFT PROMOTE BONE HEALING; PRELIMINARY RESULTS FROM SINGLE CENTRE

DOI: 10.54936/haoms242p60

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Objectives: Odontogenic cysts are epithelial-lined pathologic cavities that originate from odontogenic tissues that occur in tooth-bearing regions of the jaws. After enucleation, bone remodelling is triggered to fill the bone defects. The aim of this study is to evaluate the ability of Decalcified Freeze-Dried Bone Allograft to enhance the wound healing process by assessing the inflammation process, and radiographic bone density pre- and postoperatively.
Materials and methods: Twenty-five patients with cysts were included in this study. All patients received enucleation of the cyst, removal of the underlying cause, and Decalcified Freeze- Dried Bone Allograft, to fill the bone defect. Radiographic bone density was assessed by analysing the housefield units in a computed tomography scan preoperative and postoperative 6 months later.
Results: Patients included in the study had a mean age of 45 years (range from 16 to 72). Male to female ratio was 5:1. Bone density was found significantly higher by measuring the change in housefield units pre- and postoperatively. Complication-wise, 3 patients had a surgical site infection, leading to bone graft removal.
Conclusion: Odontogenic cysts can create a plethora of bone defects after enucleation. The preliminary results that are depicted from this present study demonstrate that Decalcified Freeze-Dried Bone Allograft can promote bone remodelling and healing.

CONSENSUS RECOMMENDATIONS FOR EVERY OFFICE TO ACHIEVE LONG TERM SUCCESS IN IMPLANT DENTISTRY

DOI: 10.54936/haoms242p61

Christian Berger, BDIZ EDI (European Association of Dental Implantologists)

Implant therapy is not to start until severe deficits have already been existing: loss of teeth, damage of hard and soft tissue. Therapeutic options related to reconstructing red-white aesthetics require teamwork and are not to be judged solely by the dentist's individual therapeutic spectrum. Without the cooperation between clinician, dental technician and patient neither functional nor aesthetical success can be reached or preserved.
This lecture will provide an overview of the recommendations on how to avoid risks in an early state, how to prevent and manage complications and will provide take-home-messages for daily use in every dental office.

STAGED MANDIBULAR RECONSTRUCTION WITH RECIPIENT BED SCULPTING BY SILICONE SPACER, AND PARTICULATE ILIAC CREST BONE GRAFT

DOI: 10.54936/haoms242p62

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Objectives: The reconstruction of segmental defects of the mandible is routinely performed with vascularised grafts due to persistence of the idea that non-vascularised grafts have a 6cm length restriction. This presentation will present the outcomes for a staged protocol for particulate graft reconstruction of mandibular defects far in excess of 6cm.
Materials and methods: Patients with segmental defects of are reconstructed at ablative surgery with a patient matched plate and a silicone spacer. 8 weeks later the defect was exposed from an extraoral approach, the spacer was removed. A posterior iliac crest graft was harvested and morselised. The PCCB was maximally compressed and implanted in the defect site.
Results: Medical grade silicone spacer is easily and rapidly adaptable to any defect, supports unhindered wound healing, is easily removable at re-entry and, dehiscence is a rare complication. The use of a spacer expedites secondary reconstruction of mandibular defects and provides the basis for highly predictable PCCB graft reconstruction. Restitution of both alveolar height and arch morphology is readily achieved. Mean defect length in centimeters was 12.35 ± 8.4 (range 5-18)
Conclusion: Successful reconstruction of mandibular defects of any size is achievable with a compressed PCCB graft. Whilst no graft system is universally applicable, accepting the basic tenet that reconstruction should mean restitution to integrity, the PCCB graft achieves this goal more reliably (with lower morbidity) than other reconstruction options.

WHEN RECURRENT CERVICOCEPHALIC PAIN SHOULD NOT BE UNDERESTIMATED AND HOW TO AVOID MISDIAGNOSIS: A CASE REPORT OF CERVICAL POTT DISEASE

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Abstract: Background: Isolated involvement of upper cervical and craniovertebral junction is an extremely rare location of tuberculosis infection, but might lead to severe consequences if the diagnosis is delayed or misread.
Case presentation: The authors present a case of cranio-vertebral junction tuberculosis with atlantoaxial and epistropheus erosion in a 28-year-old Indian man who came to the emergency department several times for a worsening neck pain that had been present for about 8 months, and mild dysphagia. A skull-thorax-upper-lower-abdomen CT scan and a cervical-dorsal MRI were performed, showing erosive phenomena of the left lateral portion of the atlas and of the odontoid process of the axis of a probably infectious origin. An intraoral biopsy of the posterior pharyngeal wall of the was performed without external approaches or aid of endoscopic instrumentation to the affected site.
Conclusions: Both the biopsy and several microbiological samples showed a mycobacterium tuberculosis complex infection. The patient underwent a quadruple anti-TB treatment. Further treatment options are discussed.

Keywords: intraoral biopsy, tuberculosis, mycobacterium tuberculosis; cervical infections, Pott's desease, Pott's spine.

SURGICAL MANAGEMENT OF WARTHIN TUMOR: LONG-TERM FOLLOW-UP OF 224 PATIENTS FROM 2002 TO 2018

DOI: 10.54936/haoms242p64

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Objectives: Warthin tumors (WT) are the second most common benign parotid gland neoplasms. They can occur as synchronous or metachronous lesions in 6–10% of cases. This study aims to compare the complication rate in 224 patients who underwent extracapsular dissection (ECD) or superficial parotidectomy (SP) for the treatment of a WT.
Materials and Methods: This retrospective study was conducted at the Department of Maxillo-Facial Surgery at the University of Naples "Federico II" from February 2002 to December 2018 on a group of patients who underwent surgical treatment for WT. The type of surgical technique was chosen based on Quer's classification. The complications evaluated were facial nerve palsy, hematoma, Frey's syndrome, and bleeding.
Results: A total of 224 patients treated from 2002 to 2018 for Warthin tumor were included in the study. Two hundred elven had solitary tumors (94.1%) and 13 had multicentric lesions (5.8%), of which 9 cases presented synchronous lesions and 4 cases presented metachronous lesions. Extracapsular dissection (ECD) was performed in 130 patients (58.3% of cases) and superficial parotidectomy (SP) in the other 94 (41.7% of cases).
Conclusions: We consider both surgical techniques as valid. In our opinion, it is essential to study each case based on Quer's Classification to obtain the best surgical outcome. Based on a lower observed rate of complications such as facial nerve palsy, Frey's syndrome, and bleeding, ECD seems to be the best option for the surgical treatment of Quer Class I lesions.

CLEAR ALIGN THERAPY: AN EFFICIENT BIOMECHANICAL TOOL IN 3D ORTHODONTIC MOVEMENTS IN CRANIOFACIAL SURGERY

DOI: 10.54936/haoms242p65

Incorvati Cristina, Meazzini Maria Costanza, Demonte Leonardo, De Gennaro Claudia, Autelitano Luca

Frequently Craniofacial patients require at the end of their facial growth orthognathic surgery in order to achieve final facial aesthetics and functional occlusal balance. Planning dental and skeletal move-

ments remains the most challenging step to ensure acceptable and stable outcomes in complex skeletal deformities. Recent advances in dental technology specifically the introduction of Clear Aligner therapy (CAT) in clinical orthodontics offer a new 3D tool with the aesthetic advantage to make this therapeutical phase more acceptable in craniofacial patients.
The possibility to merge CBCT to the intraoral scan allowing a complete visualization of the root surfaces .This new functionality seems extremely useful to accurately predict the requested dental movement in both pre-surgical and post-surgical orthodontic phases. At the present the inability to integrate different osteotomy cuts , according to the surgical needs, in the dental set up is a significant limitation and further research is needed. A case series, where this methodology has been applied will be presented.

EFFICACY OF OPERATIVE SINGLE-CANNULA ARTHROSCOPY IN THE TREATMENT OF THE TEMPOROMANDIBULAR JOINT DISORDERS

DOI: 10.54936/haoms242p66

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Background: The operative single-cannula arthroscopy (OSCA) technique requires only one cannula, through which a one-piece instrument is inserted.
Objective: The aim of this study is to compare the effectiveness of operative single cannula arthroscopy lysis and lavage, intra-articular and three-point sub-synovial steroid injections
Methods: Retrospective study which compered maximal interincisal opening (MIO), patient-rated pain (VAS) and quality of life (QOL) scores in patients underwent operative single cannula arthroscopy with intra-articular CS injections or with sub-synovial pterygoid shadow, retrodiscal synovium and anterior TMJ capsule steroid injections.
Results: In total, 65 patients suffering from internal derangement refractory to conservative treatment charts were reviewed. Arthrocentesis successfully lowered pain, and improved mouth opening, and quality of life for up to 6 months after surgery (p value ≤ 0.05). In comparison, OSCA with intra-articular CS injections effectively lowered pain, and improved mouth opening and quality of life for 12 to 24 months (p value ≤ 0.05). OSCA with sub-synovial steroid injections was significantly effective in lowering pain, improving mouth opening, and quality of life for the duration of the 36-month follow-up period (p value ≤ 0.0001).
Conclusion: OSCA with sub-synovial CS injections was superior to visually guided arthrocentesis and OSCA with intra-articular CS injections in improving jaw function, reducing pain, and improving quality of life regardless of Wilkes staging.

POSTOPERATIVE CHANGES OF CONDYLAR POSITION AFTER ORTHOGNATHIC SURGERY: PRELIMINARY STUDY OF A COMPARISON BETWEEN THREE DIFFERENT TYPES OF MANDIBULAR FIXATION TECHNIQUES

DOI: 10.54936/haoms242p67

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Abstract: Background: Orthognathic surgery is one of the most used approaches for treating dentofacial deformities. Patients seeking orthognathic surgery are mainly motivated by esthetical concerns as well as by issues related to temporomandibular joint (TMJ) dysfunctions. Surgery consists of osteotomies of both the maxillary bone (LeFort I) and the mandible (BSSO) followed by fixation. Different types of devices include bicortical screws, miniplates with monocortical screws and natural fit plates. One of the primary risks of this type of surgery is the condylar sag, which is an immediate or late change in position of the condyle in the glenoid fossa and may lead to a modification of the preplanned occlusion.
Methods: A preliminary study was conducted to compare the biomechanical stability of three different types of mandibular fixation. The analyzed devices included bicortical screws, miniplates and TEKKA natural fit plates, placed after a bilateral sagittal split osteotomy (BSSO) of the mandible in patients with malocclusion class II and III.
Conclusions: In this preliminary study the onset of condylar sag, as well as future TMJ dysfunctions, seem to be reduced using TEKKA Natural Fit Plates for osteosynthesis. Further investigations will be performed increasing the sample size in the future, to verify the conclusions of this study.

Keywords: Orthognathic surgery; condylar position; mandibular fixation; jaw surgery; malocclusion; dentofacial deformity

REVOLUTIONIZING MAXILLOFACIAL REHABILLIATION: INTEGRATING DIGITAL TECHNOLOGY AND PROSTHETIC INNOVATIONS

DOI: 10.54936/haoms242p68

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Abstract: Objectives: This study aims to provide a comprehensive analysis of advanced prosthetic rehabilitation in maxillofacial defects, focusing on evidence-based approaches to achieve optimal functional and aesthetic outcomes.
Methods: A systematic literature review was conducted, encompass-

ing electronic databases such as PubMed, Scopus, and Web of Science. Specific keywords related to maxillofacial defects, prosthetic rehabilitation, functional outcomes, and aesthetic outcomes were used to identify relevant studies. Inclusion criteria were set to select high-quality research that investigated advanced prosthetic techniques in patients with maxillofacial defects. Data extraction and critical appraisal were performed to assess the study characteristics, methodology, and reported outcomes.

Results: The review of the literature highlighted the multidimensional challenges posed by maxillofacial defects, including impaired speech articulation, masticatory dysfunction, compromised oral hygiene, and psychological distress. Advanced prosthetic rehabilitation approaches were evaluated, considering factors such as prosthesis stability, material biocompatibility, patient comfort, and long-term success. The analysis revealed promising outcomes in terms of functional restoration and improved facial aesthetics. The incorporation of digital technology, such as computer-aided design/computer-aided manufacturing (CAD/CAM) and three-dimensional (3D) printing, revolutionized the field by enabling precise treatment planning and customized prosthesis fabrication.

Conclusion: The evidence-based approach employed in this study provides valuable insights into advanced prosthetic rehabilitation in maxillofacial defects. The review highlights the importance of a multidisciplinary approach, involving oral and maxillofacial surgeons, prosthodontists, speech therapists, psychologists, and other healthcare professionals, to comprehensively address the functional, aesthetic, and psychosocial needs of patients. The integration of evidence-based practices, digital technology, and customized prosthetic solutions contributes to optimal functional and aesthetic outcomes, ultimately enhancing the quality of life for individuals with maxillofacial defects.

AUTOLOGOUS BLOOD INJECTION AS A NEW TREATMENT MODALITY FOR CHRONIC RECURRENT TEMPOROMANDIBULAR JOINT DISLOCATION

DOI: 10.54936/haoms242p69

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Purpose: There are many different surgical and non-surgical techniques have been used to treat patients with chronic recurrent temporomandibular joint (TMJ) dislocation. The non-surgical techniques consist of injecting different substances into the TMJ area. This study was carried out to assess autologous blood injection to the TMJ for treatment of chronic recurrent TMJ dislocation.

Patients and methods: Thirty patients having chronic recurrent TMJ dislocation were randomly divided into two equal groups (15 patients in each) Group A was treated only by autologous blood injection into the superior joint space (SJS), while group B received autologous blood injections to the SJS and the pericapsular tissues (PT).

Results: At the end of the follow-up period, one year, the results of the current study have shown that, injection of autologous blood to the SJS and PT gives a higher success rate (80%) than its injection only into SJS (60%). Moreover, the patients of group B had an average decrease in their maximal mouth opening (5.3 ± 2.1) higher than that of group A (3.6 ± 1.5). Also, the digital radiographic imaging of the joints in group B only has shown presence of the condylar head posterior to the articular eminence, in open position, instead of being anterior to it before the injection. In both groups, no destructive changes to the bony components of the joint have been observed.

Conclusions: We could conclude from this study that, injection of autologous blood to the TMJ in patients with chronic recurrent dislocation is considered a simple, safe and cost-effective technique. . So, we encourage injection of autologous blood to the SJS and PT for treatment of patients with chronic recurrent TMJ dislocation as it has shown better clinical and radiographic results than its injection only to the SJS.

VIRTUAL SURGICAL PLANNING IN ORIF-3 ZYGOMATICO-MAXILLARY COMPLEX FRACTURES: A COMPARISON BETWEEN TWO DIFFERENT STRATEGIES

DOI: 10.54936/haoms242p70

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Object: Fractures of the zygomatic-maxillary complex account for about 30% of all facial fractures. Multi-fragmentary and deplaced fractures are often a challenge for the Maxillofacial surgeon. The aim of our study is to evaluate the improved performance in the management of patients with tripodic fracture of the orbito-zygomatic-maxillary complex using 2 different methods of Virtual Surgical Planning, virtual reduction and mirroring, compared with the traditional management of fractures of the same nature.

Materials and Methods: A cohort of 60 patients was selected, divided into 3 groups, each consisting of 20 units enrolled at the U.O.C. of Maxillofacial Surgery of the Policlinico Federico II in Naples from 09/05/2022 to 09/01/2023. The first group was represent by patient managed with the Virtua reduction method, the second with the Mirroring method and the third with the traditional surgical method

Results: From our analys it appears that virtual reduction planning method is the most accurate in absolute terms, since the average of the discrepancies in the juxtaposition of the preoperative and postoperative CT images is 0.175±0.147 SD, compared to the mirror method (0,403±0.166 SD) and traditional method (0.875±0.112).

The comparison of the average surgical times in shows that the surgery performed by the experienced operator is on average faster (78,6 min) in both methods as compared to the intermediate operator (97,6 min) and the junior operator (105,56 min). The average surgical times in Virtual Reduction (89,5 min) is faster than Mirroring (94,25 min) and Traditional Technique (96,75 min).

Conclusion: Virtual Surgical Planning, especially Virtual reduction has in fact demonstrated greater effectiveness in terms of accuracy and improvement in the actual post-operative outcome, lower risk of complications and slight reduction in surgical time. It should be emphasised that this last variable is however dependent on the surgeon's training and experience.

VERSATILITY OF PEDICLED PROPELLER ROTATION FLAPS IN HEAD AND NECK RECONTRUCTION

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Pedicled axial or propeller rotation flaps based on the supraclavicular vessels, superficial temporal vessels, facial vessels and periorbital vessels, offer undeniable advantages in terms of execution, reliability and reduced biological cost.
Nowadays they still undergo technique evolution and find valid applications in the reconstruction of superficial cutaneous and mucosal defects, in an era where microvascular reconstructive surgery has often become the first or only choice.
The frailty of the patient, the better skin match, minimal comorbidities of the donor site, the rapid harvesting and the possibility to perform the procedure under sedoanalgesia make such flaps a valid reconstructive choice.
In reviewing their own clinical case series of Head and Neck neoplasms treated with the use of propeller flaps, the authors describe a reconstructive algorithm and the corresponding indications according to the location and size of the surgical defect; discussing the technical features of flap harvesting and the predictability of the results that can be achieved.

MULTI-DISCIPLINARY MANAGEMENT OF CUTANEOUS CANCER METASTASES IN THE HEAD AND NECK REGION

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In treatment guidelines for "Non Melanoma Skin-Cancer or NMSCs" often the aggressiveness of the tumor and its potential for loco-regional metastatic spread are underestimated and subject to divergent discussions compared to "Melanoma Skin Cancer or MSC".
Regarding melanoma, risk factors and types of lymph node spread have been identified with major diagnostic and prognostic significance, which has produced a constant and refined evolution of modern diagnostic and care pathways.
Over the past few years, these staging concepts are slowly taking root and spreading in the management of NMSCs, partly due to the constant increase in comorbidities and in the average age of patients, which makes a multidisciplinary treatment approach advisable, evaluating risks and complications of radical surgical exeresis in terms of survival and quality of life in frail patients.
The authors present their most recent experience in managing patients with advanced stages of cutaneous neoplastic disease, highlighting how a multidisciplinary approach that considers risk factors, biological aggressiveness of the disease, patient's clinical history, biological age, and associated comorbidities allows for the identification of the best treatment in terms of radicality, aesthetic and functional outcome, particularly in frail patients.

SOLITARY FIBROUS TUMOR OF THE HEAD AND NECK COMPARTMENT, OUR EXPERIENCE IN TREATMENT AND FOLLOW UP

DOI: 10.54936/haoms242p73

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Solitary fibrous tumor (SFT) comprises a histologic spectrum of lrarely metastasizing fibroblastic mesenchymal neoplasms that includes tumors formerly classified as hemangiopericytoma , it most frequently arises in the intra thoracic region but are now known to occur at any site, including the head and neck, in approximately 20% of cases. Clinical presentation in the head and neck varies by anatomic location and compressive symptoms due to indolent growth.
The STF has no gender predilection, and is mostly described as an asymtomatic growing mass in middle-aged adults, when talking about its extrathoracic counterpart though, literature describes a slight more frequent insurgence in women than men. In its extrapleural representation, symptoms are mainly aspecific, due to the presence of a growing mass.
Histologically, this tumor is composed of short spindle/polygonal cells that grow in what has been described as a "patternless" growth pattern, alternating hyper cellular and hypo cellular sclerotic foci, keloid like stromal hyalinization and prominent "staghorn"vascular branching.

The most frequent behavior of this tumor is benign and follows an indolent course, although it has a 20% of malignancy, often defined by markedly increased cellularity and/or the presence of ≥4 mitoses per 10 high- power fields (hpf).
Because of its benign appearance, the treatment of choice for STF in surgical excision in wide free margins. Sometimes though, recurrence and metastasis are possible. Studies show an association between lesion size, increased mitosis, increased cellularity, hemorrhage and necrosis, and clinical behavior.
In our study we describe our experience in the treatment of solitary fibrous tumor of the head and neck compartment on a series of 13 patients.

THE COMPREHENSIVE FACIAL INJURY (CFI): A MODERN COMMUNICATION TOOL ON MAXILLO-FACIAL TRAUMAS CHARACTERISTICS

DOI: 10.54936/haoms242p74

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Aim: The Comprehensive Facial Injury (CFI) score is a novel tool developed to stratify patients based on the severity of the facial trauma, allowing an effective multidisciplinary communication to program the correct management of patients.
Material and methods: The CFI score is based on clinical and radiological data obtained at the admission and aims to predict estimated operating time of the needed procedures. The statistical validation was conducted on a sample of 1050 patients, treated by surgical teams from two trauma centers. Predictive accuracy on the total operating time and hospitalization period was evaluated on 1406 patients.
Simultaneously the risk of associated non-facial lesions in patients affected by severe facial traumas was analyzed.Two cut-offs were identified using Receiving Operating Curves (ROC) to discriminated groups of homogeneous patients in terms of severity and management protocols.
Results: A strong linear regression was demonstrated between the CFI score value, operating time and hospitalization period. A higher value is correlated with a higher probability of associated lesions so it represents a strong risk factor to Intensive Care Unit admission. CFI score enables to discriminate into: mild facial traumas, associated with lower risk of hospitalization and needing of surgical treatment, moderate facial traumas, with higher risk of hospitalization and needing surgical treatment requiring general anesthesia and severe facial traumas, with higher risk of major surgeries, Intensive Care Unit admission and associated non- facial lesions.
Conclusion: Being a reproducible and easy-of-use tool, along with others traditional trauma scores, the CFI score can facilitate both communication and organization of the clinical activity of trauma centers, optimizing patient management in facial traumas; it also represents a profitable tool for the scientific research.

Keywords: CFI value, facial traumas value, maxillo-facial lesions, severity of facial trauma, hospitalization period, maxillo-facial fractures classification

DIPLOPIA AND ORBITAL FLOOR SURGICAL INDICATION IN ZYGOMATIC MAXILLARY COMPLEX FRACTURES. 10-YEAR PRELIMINARY STUDY

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Abstract: Literature describes variable rates of diplopia of associated to zygomatic maxillary complex (ZMC) fractures, spanning from 6% to 40%. The aim of this study on orbital changes in ZMC fractures is to retrospectively assess if diplopia and its validation through the orthoptic evaluation, is a reliable predictor of surgical treatment indication of the orbital floor of ZMC fracture patients and its possible association with specific clinical determinants. Data of patients attending the Maxillofacial Surgery Unit of the University of Messina, between January 2012 and December 2022 were retrieved. Statistical analysis of positive vs negative diplopia at both the clinical examination and the orthoptic evaluation and subgroup analysis were performed. 320 patients were included in analysis. 50 vs 270 showed diplopia at the clinical examination, while 70 vs 250 patient showed diplopia at the orthoptic evaluation. Statistical analysis for every determinant and subgroups did not show statistical significance ($p > 0.05$). Performing a routine orthoptic evaluation allowed an increase of 6.3% positive reports. While it seems that no basic clinical parameter can predict diplopia, the orthoptic evaluation appears to be a more objective mean to assess this symptom. This may lead to a higher number of patients suitable for surgery and possibly guiding physicians to a different operative program from the start.

Keywords: diplopia; zygomatic fractures; orbital floor fractures; ZMC fractures

ARE LOCATION AND SEVERITY OF FACIAL TRAUMA RISK FACTOR FOR ASSOCIATED CERVICAL LESIONS?

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Introduction: Facial traumas can be associated with cervical spine lesions that need to be correctly and promptly recognized to allow safe management of trauma patients. The aim of this work is to demonstrate a correlation between cervical spine lesion and location and severity of facial trauma.
Material and methods: A 10 years retrospective analysis has been conducted with prospectively collected data, patients had a diagnosis of at least one facial and/or cervical spine lesion. Facial fractures had been categorized using the Comprehensive Facial Injury (CFI) score. Patients were stratified in: Mild Facial Trauma (CFI<4), Moderate Facial Trauma (4 ≤ CFI < 10), Severe Facial Trauma (CFI≥10). The primary outcome was to identify severity degree and site of the facial trauma that correlated with a higher probability of having concomitant cervical spine lesions.
Results: 1197 patients were included in the study: 78% affected by facial trauma, 16% affected by cervical spine lesions.
48% of patients was characterized by mild facial trauma, 35% moderate, 17% severe.
The middle facial third was involved in 45% of cases, the superior third in 13% and the inferior in 10%.
The multivariate analysis shows multiple independent risk factors for facial lesions with cervical spine lesions. The main factors were: middle facial third involvement (OR 1.11, p 0.004) and the severity measurement of the facial trauma, showing that the risk of develop cervical spine lesion increases by 6% with every point of CFI score attributed (OR 1.06, p 0.004)
Conclusion: Facial traumas represent a risk factor for the concomitant presence of cervical spine lesions. Between the other factors, the main risk is associated with sever middle facial third traumas. To stratify patients based on site and severity of the facial trauma can be helpful in the appropriate diagnostical and therapeutical management of patients at risk of associated cervical spine lesions.

SUPPORT TOOLS IN THE DIFFERENTIAL DIAGNOSIS OF SALIVARY GLAND TUMORS THROUGH INFLAMMATORY BIOMARKERS AND RADIOMICS METRICS: A PRELIMINARY STUDY

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Objectives: The purpose of this study was to investigate how the systemic inflammation response index (SIRI), systemic immune-inflammation index (SII), neutrophil/lymphocyte ratio (NLR) and platelet/lymphocyte ratio (PLR), and radiomic metrics (quantitative descriptors of image content) extracted from MRI sequences by machine learning increase the efficacy of proper presurgical differentiation between benign and malignant salivary gland tumors.
Material and Methods: A retrospective study of 117 patients with salivary gland tumors was conducted between January 2015 and November 2022. Univariate analyses with nonparametric tests and multivariate analyses with machine learning approaches were used.
Results: Inflammatory biomarkers showed statistically significant differences ($p < 0.05$) in the Kruskal-Wallis test based on median values in discriminating Warthin tumors from pleomorphic adenoma and malignancies. The accuracy of NLR, PLR, SII, and SIRI was 0.88, 0.74, 0.76, and 0.83, respectively. Analysis of radiomic metrics to discriminate Warthin tumors from pleomorphic adenoma and malignancies showed statistically significant differences ($p < 0.05$) in nine radiomic features. The best multivariate analysis result was obtained from an SVM model with 86% accuracy, 68% sensitivity, and 91% specificity for six features.
Conclusions: Inflammatory biomarkers and radiomic features can comparably support a pre-surgical differential diagnosis.

Keywords: machine learning; neutrophil-to-lymphocyte ratio; platelet-to-lymphocyte ratio; radiomics; salivary gland tumors; systemic immune-inflammation index; systemic inflammation response index

TRANS-ORAL ROBOTIC SURGERY: AN ALTERNATIVE TECHNIQUE FOR THE TREATMENT OF PLEOMORPHIC ADENOMAS OF THE PARAPHARYNGEAL SPACE

DOI: 10.54936/haoms242p78

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Objectives: The aim of this study has been to describe our experience with pleomorphic adenomas of the parapharyngeal space (PPS) treated through Trans-oral Robotic Surgery (TORS). Tumours arising from the PPS comprise less than 0.5% of all head and neck tumours. Salivary gland tumours account for 40–50% of PPS lesions with pleomorphic adenomas representing the most common tumours (80–90%).
Materials and Methods: This study is a retrospective review of the clinical records of 14 patients treated for a PPS tumour by TORS. The same pre-operatory workflow was applied for each patients: a fine needle aspiration biopsy and a magnetic resonance imaging (MRI) were performed. The results were used to plan the correct surgical approach. Post-operative MRI was performed at 6 months after sur-

gery in accordance with our protocol.
Results: In 13 cases (93%), TORS allowed the integrity of the tumour capsule to be preserved, with a successful separation from the parapharyngeal structures. In one case a rupture of the lesion capsule occurred, but the 6 month post-surgery MRI showed no recurrence of the disease.
Conclusion: Our experience indicates that TORS is a safe surgical procedure able to perform a minimally invasive excision of benign tumours of the PPS in selected cases. The 360° motion of the robotic system, the three-dimensional high definition visualization and the reduction of hand tremors allow a good manipulation of the tissues, a clear identification of the tumour capsule and a precise dissection of the tumour, with no apparent capsule fragmentation. Furthermore, TORS allows an optimal control of haemostasis, which is more difficult to obtain with others access. A pre-operative diagnosis and careful patient selection is necessary to reduce surgical morbidity.

Keywords: Trans-oral Robotic Surgery (TORS), Pleomorphic Adenoma, Parapharyngeal Space, Salivary Glands

TREATMENT PLANNING CLINICAL CONSIDERATIONS IN ORTHOGNATHIC SURGERY (PAST AND PRESENT)

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Orthognathic Surgery has a tremendous input on patients life as it changes the facial appearance as well as the quality of their life. The aim of the presentation is to share our clinical experience in issues on case selection and patient management, on esthetic changes related to jaw movements, specific side effects that occur on facial esthetics due to the skeletal changes, on limitations of the 3D movements and how we manage and finally what we learned from the past experience, why and how we proceed today.

TREATMENT OF MAXILLARY HYPOPLASIA IN INDIVIDUALS WITH CLEFT LIP AND PALATE WITH RED SYSTEM

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Objective: The aim of this case report is to present a patient with unilateral cleft lip and palate and maxillary hypoplasia who was treated with Rigid External Distraction (RED) device. With the RED system, a double jaw surgery, that was necessary in the past, can be avoided as gradual distraction at an early age can correct the deformity of the maxilla both in the horizontal and vertical axis, with better and long lasting results.
Methods and Materials: Diagnostic records of the jaws and the facial bones including x-rays were taken. Fixed orthodontic appliances were placed in the mouth before surgery. RED appliance was placed under general anesthesia engaging the area around the Le-Fort I osteotomy to enable distraction osteogenesis. A latency period of seven days postoperatively was necessary before the activation of the device. Maxilla was advanced 1mm every day.
Results: Significant protraction of the maxilla lead to correction of the Class III skeletal relationship. Concavity of the profile was corrected and a stable Class I occlusion was obtained.
Conclusion: The RED system has good control of the maxillary protraction in all three planes of space, thus enabling us to correct the maxillary deformity effectively. Caution should be taken not to cause velopharyngeal incompetence and speech problems.

MULTIDISCIPLINARY APPROACH OF AN FRONTOETHMOIDAL

DOI: 10.54936/haoms242p81

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Objectives: The purpose of this paper is to report a case of a frontoethmoidal meningoencephalocele.
Materials and Methods: Encephalocele are rare congenital malformations, that can be divided in two groups: meningocele and meningoencephalocele. Congenital meningoencephalocele is a herniation of brain and meninges through a skull base defect. In frontoethmoidal meningoencephalocele, the herniation occurs through a defect in the anterior cranium, between the frontal and ethmoidal bones. This entity is very prevalent in Asia, but relatively rare in Western Europe, Japan, Australia, and North America.
Results: The authors present the case of a 11-month-old female infant who was transferred to Portugal from Guinea- Bissau with a frontonasal mass since birth that increased in size, causing obvious facial disfigurement. The patient didn't present breathing difficulties, nasal obstruction or active nasal fluid leak. She was admitted for further investigation. CT scan and MRI showed an extensive bony defect with herniation of meninges and brain matter of both frontal lobes thru the frontal and orbital wall defect. The patient underwent a surgical correction with excision of the herniated tissue, cranioplasty with resorbable plating system and reconstruction of the nasal defect with frontal bone flap tissue, and local skin flap. She returned 10 days after she was discharged with a frontonasal skin infection and admitted for antibiotic therapy. Control CT and MRI showed no signs of CSF leakage and she responded well to the treatment.
Conclusion: The goal of the treatment is to return the cerebral components in to the cranial cavity along with amputation of dysplastic tissue and closure of the bony defect. The ideal timing of the surgical

reconstruction is controversial. Patient's age, presenting symptoms and potential complications should be considered. Early surgery has advantages like decreasing the risk of meningitis and other infections, enabling nasal respiration and preventing further craniofacial deformities.

ARTERIOVENOUS MALFORMATIONS IN THE ORAL AND MAXILLOFACIAL REGION: A PICTORIAL OVERVIEW OF CLINICAL CASES AND A COMPREHENSIVE LITERATURE REVIEW

DOI: 10.54936/haoms242p82

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Introduction: High-flow oral and maxillofacial arteriovenous malformations (AVMs) are rare vascular anomalies characterized by direct communications between the arterial and venous systems, bypassing the capillary bed. AVMs can result in severe functional impairments, significant facial deformities, and a higher risk for life-threatening bleeding. Accurate diagnosis involves a thorough physical examination and imaging studies. Various sclerosing agents and embolization, combined with surgical treatment, are still the most standard approach to treating these lesions. However, the treatment of these disorders remains challenging due to high recurrence rates.
Objectives: The main objective of this work is to provide a comprehensive understanding of AVMs in the facial region, with a specific emphasis on underlining the imaging findings associated with this condition. Additionally, we aim to examine their clinical presentation, diagnosis, and management.
Materials and Methods: An imaging series of clinical cases involving oral and maxillofacial AVMs will be presented. In addition, a literature review will be conducted.
Results: Oral and maxillofacial AVMs are uncommon and heterogeneous vascular anomalies. Normally AVMs are present at birth but manifest mainly in childhood or adolescence. They have a gradual onset and progression. Diagnosis typically involves the use of various imaging modalities, such as plain radiography, computed tomography (CT) scans, magnetic resonance imaging (MRI), and angiography. A pictorial review of these imaging studies provides valuable insights for treatment planning and management. Treatment options often include a multidisciplinary approach, combining sclerotherapy, embolization, and surgical intervention.
Conclusions: AVMs in the facial region are complex entities that require careful diagnosis and management. A clear understanding of their clinical presentation, diagnosis, and management options is crucial for optimal patient outcomes.

Keywords: Arteriovenous Malformations; Facial AVM, Oral and Maxillofacial Region;

POSTGRADUATE TRAINING IN ORAL- AND MAXILLOFACIAL SURGERY IN ISRAEL, A CONCLUSIVE SURVEY AMONG RESIDENTS

DOI: 10.54936/haoms242p83

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Objectives: This study aimed to assess a survey of residents to obtain relevant information about their training in Oral and Maxillofacial Surgery in Israel.
Methods: Overall, 57 questionnaires were completed on a voluntary and anonymous basis by Israeli OMFS residents.
Results: Participants' mean age was 34.6 years (67% male, 33% female). The responders were almost evenly distributed between the 5 years of residency training. Majority (63.2%) of the responders were before taking any of the residency exams. 75.5% of the responders graduated for Israeli dental school and 35.2% of them had additional research degree (29.8% MSc, 5.3% PhD). A third of the responders planned to complete post-residency MD training, while 47.4% haven't yet decided. As for residency difficulties and preferences, the most prevalent initial difficulties were adaptation for hospital work demands (56.1%) followed by overwhelming by the amount of OMFS knowledge needed (54.4%). The responders mentioned trauma as the treatment for which they have the highest interest (63.2%), followed by orthognathic surgery (52.6%) and oncologic surgery (35.1%). On self-assessment of their skill, the two topics for in which the responders had the most confidence were oral surgery (35.1%) and trauma (33.3%). There was a trend of increasing confidence in orthognathic surgery and oncologic surgery with the advancement in residency training.
Conclusions: The data collected gives an insight for residents' demographic data, preferences and difficulties in training in Oral and Maxillofacial Surgery. It presents the growing confidence in more complex surgery with the advance in training, while revealing the importance of pre- residential medical training for OMFS residents.

3D RECONSTRUCTION OF ATROPHIC JAWS USING CAD/CAM TECHNOLOGY – FROM PLANNING TO EXECUTION THE COOPERATION WITH THE MAXILLOFACIAL PROSTHODONTIST

DOI: 10.54936/haoms242p85

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Background: Aging, maxillofacial trauma, periodontal disease, cysts, lesions and ablative surgery can result in decreased alveolar bone volume. In the maxilla, limited bone quantity and quality, especially in the posterior region results in low success rates for dental implants. In the mandible, inferior alveolar nerve position complicates the possibility of reconstruction using dental implants. Various methods for bone augmentation have been described such as conventional techniques utilizing autografts and allografts. Lately the use of CAD/CAM technology is rising among different professions including maxillofacial surgery.

In-house planning is becoming more abundant and has its advantages.
Methods: Different methods utilizing CAD/CAM technology will be presented. These include 3D planning of reconstruction and guided surgical aids for accurate placement of conventional, pterygoid and zygomatic implants. Nerve lateralization and guided implant placement will be presented.
Results: 90% of the implants have undergone proper osseointegration, no significant bone loss was observed and reimplantation was performed or is planned. Soft tissue healed properly with normal probing pocket depth. Successful implants were prosthetically restored.
Conclusions: CAD/CAM enable us to adapt the the surgical result to a more predictable and prosthetic oriented and functional results, resulting in better longevity of the implants and the restoration functions as ideally as possible.

Keywords: CAD, CAM, 3D Planning, Extra maxillary, Zygomatic, Implant, Atrophic jaws

A CONSERVATIVE SURGICAL APPROACH IN THE TREATMENT OF ODONTOGENIC KERATOCYSTS; SIX YEARS OF CLINICAL AND IMAGING FOLLOW UP

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Objectives: Odontogenic keratocysts have been treated with various surgical modalities, the choice of treatment method today is still controversial and varies from the most conservative to the very aggressive with extensive resections, the most conservative approach has proven to be the most predictable of treatment.
We recommend a conservative approach with a combination of methods such as enucleation, decompression with and without curettage, and/or marsupialization followed by peripheral osteotomy.
Material and Methods: We have had a six-year clinical and imaging follow-up of multiple cases treated with this method.
Results: Patients treated with this modality have presented much less morbidity and much more predictable results with less postoperative discomfort, adequate bone healing, no recurrence, and no need for bone resection.
Conclusions: Treatment such as enucleation with or without bone curettage, decompression, marsupialization followed by a final peripheral osteotomy, have presented a more predictable development and with a much lower morbidity in the treatment.

OPEN REDUCTION OF MANDIBULAR CONDYLE FRACTURE, A STILL CONTROVERSIAL TREATMENT OPTION: TO OPEN OR NOT TO OPEN?

DOI: 10.54936/haoms242p87

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Backgrounds: With the passage of time, mandibular condylar fractures have been treated with various surgical modalities, the choice of treatment method today continues to be controversial and varies from closed reduction to open reduction and must be chosen in relation to the type and location of the fracture always considering other associates factors such as facial injuries and concomitant diseases.
Objectives: Review the different criteria to establish a diagnosis and treatment to resolve mandibular condyle fractures recommending open reduction.
Results: Patients treated with this modality have much less morbidity and more predictable results with less postoperative discomfort
Discussion: The management of condyle fractures remains controversial, However, as time passes and comparative and analytical studies on the subject are carried out, criteria are established that facilitate decision making regarding the management and treatment of condyle fractures with open reduction.
Conclusion: Treatment with open reduction in condylar mandibular fracture has presented a more predictable development, less morbidity and adequate function

ORAL SURGERY PROCEDURES UNDER LOCAL ANESTHESIA IN PEDIATRIC PATIENTS

DOI: 10.54936/haoms242p88

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Objectives: Children need oral surgical intervention to treat either different pathological entities or trauma. Most common problems are related to dentition development and include removal of supernumerary teeth, removal of ankylosed primary molars, upper lip or lingual frenum correction, exposure of impacted teeth for orthodontic reasons, excision of benign tumors or enucleation of cysts of the jaws. Dentoalveolar trauma is also common in children.
When operating on children, surgeons need to be familiar with primary and mixed dentition, children's growth potential as well as the problems most often developing during childhood. Additionally, a degree of expertise and behavioral knowledge are helpful. Depending on the child's age and the severity of the problem, local or general anesthesia is selected.
The aim of this presentation is to review the current literature on the surgical oral procedures performed in children under local anesthesia, and to present selected cases treated at the clinic of oral and maxillofacial surgery of the dental school of the University of Athens.
Materials and Methods: Literature research was performed on MEDLINE for the decade 2013-2023, with the following keywords: local

anesthesia, oral surgery procedures, pediatric dental patient, behavior guidance. The files of young patients who underwent operations under local anesthesia at our department, were reviewed and representative cases were selected.
Results: Dentoalveolar operations of various severity are performed under local anesthesia; in cases of very young children (before primary school age), only mild alveolar trauma can be treated, whereas in primary school age, small sized alveolar lesions can be operated. In older children, most alveolar operations can be performed.
Conclusion: Young children with minor dentoalveolar surgical problems can successfully be treated under local anesthesia; certain indications such as primary cooperation of the child and short duration of the procedure, need to be fulfilled.

Keywords: oral surgery, pediatric patient, local anesthesia, behavior management

THE ROLE OF LEUKOCYTE AND PLATELET-RICH FIBRIN IN THE PREVENTION OF MEDICATION-RELATED OSTEONECROSIS OF THE JAW, IN PATIENTS REQUIRING DENTAL EXTRACTIONS: AN OBSERVATIONAL STUDY

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Abstract: Objectives: Medication-related osteonecrosis of the jaw (MRONJ) is a significant complication which can present following a dental extraction in patients receiving anti-resorptive and anti-angiogenic medications. The purpose of this study was to investigate the possible beneficial effect of L-PRF in the prevention of MRONJ in patients receiving these medications and requiring dental extractions.
Materials and Methods: Thirty-nine patients were included and divided in two groups, depending on whether L-PRF was used after the required dental extraction or not. Subsequently, the patients were categorised into low and high-risk for developing MRONJ, as recommended by the Scottish Dental Clinical Effectiveness Programme (SDCEP) guidance.
Results: None of the patients in the L-PRF group returned with established MRONJ. Five high-risk patients in the control group presented with established MRONJ in the follow-up appointment. Significant statistical difference (p=0.04) was observed following comparison of the high-risk patients of the two groups.
Conclusion: These encouraging results suggest that L-PRF may be useful in the prevention of MRONJ following a dental extraction especially in patients of the higher risk category. A protocol for the management of this type of patients is also introduced.

Keywords: Medication-related osteonecrosis of the jaw; Leukocyte and Platelet-rich fibrin; Dental extraction; Oral Pathology; Bisphosphonates

LARGE ODONTOGENIC TUMORS IN CHILDREN: FROM INITIAL TREATMENT TO FINAL REHABILITATION WITH DENTAL IMPLANTS. REPORT OF 3 CASES

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Objectives: To retrospectively review cases of large odontogenic tumors in 3 children, over a 20-year period; surgical excision of tumors, bone grafting of defects, follow-up, and finally implant rehabilitation in adulthood, were included.
Materials and Methods: Medical records of patients who underwent surgical removal of odontogenic tumors at our department since 2002 were reviewed; all patients who had lost permanent teeth due to tumor size and location and reaching adulthood, underwent implant rehabilitation were selected.
Results: 85 odontogenic tumors of both maxilla and mandible were found in total. Three patients fulfilled the criteria: two girls 14 and 10 years old and a 7-year-old boy, at the time of tumor resection. They were diagnosed with a sizeable odontogenic myxoma of the maxilla, and 2 odontogenic fibromas of the mandible respectively. Following first diagnosis and radiographic examination, surgical removal of tumor, under general anesthesia, was performed; bone defects were reconstructed with grafts. Follow-up was long lasting due to lesions' diagnosis, to early recognize possible recurrence. The latter occurred twice in one of the cases of odontogenic fibroma, and was again surgically treated. Implant rehabilitation was performed when patients reached adulthood. Prior to implant placement, bone grafting took place for every case, using autologous bone.
Conclusion: Early diagnosis, which is very important to prevent serious consequences, such as permanent teeth loss, was not always the case in our series of tumors. Nevertheless, surgical approach and follow-up were helpful, in cases of large tumors; treatment was completed, with bone grafting and dental implants.

Keywords: odontogenic tumors, children, surgery, follow-up, young adults, implant rehabilitation

ADJUVANT USE OF LEUKOCYTE-PLATELET RICH FIBRIN IN THE SURGICAL MANAGEMENT OF ESTABLISHED MEDICATION RELATED OSTEONECROSIS OF THE JAW

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Objectives: Anti-resorptive or anti-angiogenic medications are used for patients with bone anomaly or malignant conditions respectively. This poses risk of medication related osteonecrosis of the jaw (MRONJ). The American Association of Oral and Maxillofacial Surgeons classifies MRONJ into stages with recommended treatment algorithms. MRONJ risk amongst patients with osteoporosis and malignant conditions is <0.05% and <5% respectively. Management can be subdivided into operative and non-operative therapy. Literature advancements support using adjuvants. Leukocyte-Platelet Rich Fibrin (L-PRF) is an autologous biomaterial. It's composition of leukocytes and platelets incorporated in a fibrin matrix enables release of growth factors promoting angiogenesis, bone regeneration and soft tissue healing. The aim of this study focuses on the outcome of patients, with established MRONJ, treated with surgical intervention and L-PRF.
Material and Methods: Patients (nine high risk, one low risk) with established MRONJ stage 1 and 2 were treated with surgical debridement/sequestrectomy with L-PRF from 2019-2022. Following intervention, patients were reviewed and satisfied clinical outcomes based on the following: asymptomatic, complete soft tissue healing, absence of infection/inflammation, fistula, or exposed bone.
Results: Ten patients (eight females, two males) with a mean age of 75 ± 8.54 were treated. All patients satisfied clinical outcomes. Seven were discharged with continued care under their general dental practitioner, two required no further intervention for the site treated and one is under review due to their complex medical history. This was the only case requiring a second procedure following further treatment for breast cancer metastasis. Treatment was successful and they are under review.
Conclusion: Our retrospective observation study revealed favourable results for the use of L-PRF for management of established stage 1 and 2 MRONJ. Taking into consideration the low cost and simplicity of treatment, the authors believe L-PRF should be considered as the preferable treatment choice in conjunction with surgical treatment.

Keywords: Medication Related Osteonecrosis of the Jaw, Osteonecrosis, Platelet-Rich Fibrin, Oral Surgical Procedures, Debridement

IMPLANTOLOGY LONG TERM COMPLICATIONS IN MAXILLA PRESENTED AS RHINO-SINUS DISEASE – WHEN AND WHAT TO DO FIRST

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Objective: Peri-implant disease (peri-implantitis, marginal bone loss, apical bone loss) in the maxilla can resorb the maxillary bone until a connection is created between the oral cavity and the maxillary sinus or nasal cavity. This situation creates a micro-organism highway between these cavities. The aim of our study is to find the difference in the disease outcome in different time lines and pathology. With understanding of the multidisciplinary disease, we can offer the optimal treatment plan with minimal disturbance to the quality of life of the patients.
Material and Methods: 182 Patients examined in the multidiscipline clinic of Rhinology and Oral and Maxillofacial Surgery in Meir Medical center between the years 2015- 2022, were after dental implant procedure, with or without a bone graft or sinus lift. Data on the time from the bone graft and the dental implant procedure compared to the time from the initiation of the nasal and oral symptoms were collected. Demographics, co-morbidities, prior surgical interventions and implants examination were evaluated.
Results: Of the 182 patients, 25% had sinus augmentation complication, 40% had a peri-implant disease penetrating the maxillary sinus floor with or without sinus lift, 30% with migrated implants and 5% had MRONJ with dental implants. 75% of the patients had surgery (Intra-oral approach, FESS or combined approach) with 100% healing. Only 1% of the patients continued for dental implants again.
Conclusions: The indication for a surgery and the approach (oral, nasal or both) was correlated to the time from the dental procedure and the intensity of the symptoms. Chronic disease mostly treated with combined approach while saving as much of the bone graft and dental implants for a future rehabilitation.

A MODERN WORKFLOW TO A RATIONAL USE OF TECHNOLOGY IN ORBITAL RECONSTRUCTION

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Introduction: The orbital anatomy is one of the most complex in the human body, it not only contains entirely the sense of sight but also deeply affects the relationship life. Several pathologies can present in this anatomical area: primarily traumatic process can cause bony fractures resulting in a distortion of the anatomy, neoplasm, inflammatory process, vascular malformation and so on.
Surgery can be challenging, placing the surgeon in stressful procedures if not adequately trained or supported by novel tools such as informatic ones.
We propose a clinical and radiological diagnostic-therapeutical algorithm that could be used as a guide to discriminate cases that need more assets from the ones that can be treated with traditional surgery.

Material and Methods: A retrospective data analysis was conducted, data were collected prospectively. Patients were treated in two maxillo-facial unit from 2010 and 2022. Only patients with monoliteral orbital reconstruction were included to verify the accuracy of the reconstruction. Patients were stratified based on type of reconstruction used and the Jaquìery Classification of the orbital lesion. The primary outcome was to assess the best degree of technology tool for each group of patients, measuring accuracy of the reconstruction, surgical time, number of reinterventions. Accuracy of the reconstruction was evaluated by comparing the postoperative volume of the affected orbit with the contralateral (non-affected).
Results: 229 patients were admitted in the study, 35 characterized by Jaquìery class I, 89 class II, 68 class III, 33 class IV e 4 class IV. In patients with lower grade of anatomical defects (Class I, Class II) the use of technological aids shows no noticeable improvement while in higher grade (Class III and IV) the use of CAS shows a reduction in terms of operating time and number of reinterventions and higher accuracy in volume.
Conclusion: The use of Computer Assisted Surgery (CAS), in the last decades has become more and more common due to the ability to allow a better understanding during the preoperative phase along with useful tools during the procedure itself that enable operators to obtain more accurate and reproducible results.
CAS instruments, currently, can be energy and money – consuming so their use is often limited in some cases even if no study had found clear indication whether or not more resources can be justified.
The proposed work-flow can be useful to help operators choose the correct option to asses different cases, tailoring the treatment based on clinical and radiological characteristics.

EFFECTIVENESS OF LE FORT III OSTEOTOMY ON OBSTRUCTIVE SLEEP APNEA SYNDROME IN CRANIOFACIAL SYNOSTOSIS

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Aim: Craniofacial synostosis are syndromes characterized by hypoplasia and retrusion of midface, usually associated with skull base deformity, laxity and redundancy of pharyngeal soft tissues and adenotonsillar hypertrophy. These morphological alteration leads to different degrees of upper airway obstruction and obstructive sleep apnea syndrome (OSAS). The scientific literature is not unanimous in evaluating results regarding the effectiveness of midfacial advancement for the treatment of OSAS in patients affected by craniofacial synostosis. This study aims to evaluate the correlation between midface skeletal movements and anatomical changes in airways, as well as changes in the polysomnographic parameters, in patients affected by craniofacial synostosis.
Material and methods: 29 patients affected by craniofacial synostosis and OSAS who underwent a Le Fort III osteotomy with classic technique or using a rigid external distractor (RED) were included. For each patient, lateral standardized cephalometric X-Ray or CT scan and polysomnography were collected before and after surgery. Changes between pre-and post-operative cephalometric and polysomnographic parameters were then evaluated.
Results: Skeletal changes obtained with Le Fort III osteotomy were all highly statistically significant as well as the improvement in polysomnographic parameters. However, the polysomnographic changes were not linear with the bony advancement.
Conclusions: This study confirms that Le Fort III osteotomy has a positive effect on OSAS due to an effective advancement of midface. However, we have to consider that an important role in the genesis of OSAS is played also by soft-tissue tone, adeno-tonsillar hypertrophy and oropharyngeal stenosis.

MANDIBULAR PATHOLOGIC FRACTURES - A SINGLE CENTRE STUDY

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Objectives: The mandibular pathologic fractures incorporate a significant group of head and neck fractures. The cause of them is not an extraneous force directly to the mandible, but a medical condition that weakens the lower jaw. A review of the researchable bibliographic data, reveals that there is no much of it describing the diagnosis, the causes of this kind of fractures, and the treatment of it.
Materials and Methods: Our study is depended on a case series of 38 patients of our clinic, and describes 40 cases of spontaneous fractures of the mandible, throughout a period of 13 years.
Results: The results of our study are summarized in the following points: males were the 79,5% with a mean age of 62 years old, as the rest were females with a mean age of 75 years old that presented a mandibular pathologic fracture. The first diagnosis with no infection symptoms corresponded to the 47,5% of the study sample, and in the most of the cases (18), the cause was the osteoradionecrosis of the mandible. The mean days of hospitalization found to be 24,75, referring to the treatment of the the fracture.
Conclusion: The mandible is normally a powerful bony structure. A spontaneous fracture of it must immediately worry the attending physicians to investigate the cause of it and to choose the best available treatment of the fracture. The data of our study in terms of a case series could be a auxiliary addition to the existing literature.

DOUBLE MANDIBULAR OSTEOTOMOY - A SINGE-CENTRE STUDY

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Objectives: The double mandibular osteotomy, as a surgical mode to access the deeper neck tissues adjacent to the carotid sheath and up to the skull base, is a method that in the researchable literature appears not more than 50 years. Ours' clinic case series confirms that this surgical approach is mandatory for the treatment of parapharyngeal tumours and other neck medical conditions.
Materials and Methods: Our study group consists of 11 patients, where 10 of them finally were treated by using the surgical technique of the double mandibulotomy, during the last 6 years.
Results: The females, were the 7 of our patients, and the mean age of the study sample was 47,9 years old. The main causes of the double mandibulotomy process were 54,54% for parapharyngeal tumours and 18,18% for deeper lobe parotid tumours. The reference of the patients to our clinic was due to an incidental radiologic finding for a percentage of 27,27. The mean lesion measures was 4,68 cm. The long-term uneventful follow up revealed a 90% score. The 60% of the procedures necessitated the cooperation with a non oral and maxillofacial specialty surgeon.
Conclusion: The double mandibular osteotomy is an essential way to treat deeper neck surgical lesions and medical conditions. It may has to be executed by a multidisciplinary surgical team and a statutory head and neck surgical centre is essential. Our case series could be a useful addition to the literature data.

THE COMBINATION OF INFLAMMATORY BIOMARKERS AS PROGNOSTIC FACTOR IN MALIGNANT SALIVARY GLAND TUMORS

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Abstract: Objectives: The aim of this study was to investigate how the main preoperative inflammatory biomarkers, as systemic inflammation response index (SIRI), systemic immune-inflammation index (SII), neutrophil-to-lymphocyte ratio (NLR), and platelet-to-lymphocyte ratio (PLR), taken individually and combined, might be related to overall survival (OS) in surgically treated patients for malignant salivary gland tumors (MSGTs).
Methods: A retrospective analysis on 74 cases of MSGTs following surgery at Maxillofacial Surgery Unit between January 2011 and June 2018 was performed. For each patient the values of SII, SIRI, PLR, and NLR were calculated and the Receiver Operating Characteristic (ROC) curves were used to obtain the optimal cutoff values for each index. Survival curves at 1–3–5 years of patients with different combinations of inflammatory biomarkers values were estimated using the Kaplan– Meier method.
Results: The optimal thresholds with the highest sensitivity and specificity were 3.95 for NLR, 187.6 for PLR, 917.585 for SII, and 2.045 for SIRI. The univariate analysis revealed that all the indices, when above the calculated threshold value, were related with a worse prognosis; the ROC curves revealed that the more significant prognostic combination was SII + SIRI. The estimated 5-year OS rate in patients with SII + SIRI above cut-off was 12.5% ($p < 0.001$).
Conclusion: Preoperative inflammatory biomarkers can be used as an effective and low-cost prognostic factor to stratify high-risk patients surgically treated for MSGT. SII + SIRI combination can independently predict the OS of these patients, because when both indices are above the threshold, the prognosis is worse. The prognostic score system based on SII + SIRI may be good clinical practice as a reference for clinical decision-making.

Keywords: malignant salivary gland tumors; overall survival; inflammatory biomarkers; systemic immune-inflammation index; platelet-to-lymphocyte ratio; neutrophil-to-lymphocyte ratio; systemic inflammation response index.

USING QR CODES TO EFFECTIVELY COLLECT PATIENT FEEDBACK WITHIN ORAL SURGERY UNITS

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Abstract: Objectives: Feedback is essential for commissioning, service evaluation and improving patient care. Tools of collecting feedback such as Patient-Reported Experience Measures (PREMS) are advocated in the "Guide for Commissioning Oral Surgery and Oral Medicine". PREMS evaluate experience at the time of care. Collecting PREMS can often be challenging due to the resources required and is often only collected over a short time period, which limits its use and effectiveness.
We therefore aimed to obtain patient feedback through PREMS in a sustainable, effective and long- term manner and evaluate our service.
Materials and Methods: A 10 question PREMS survey was created using JISC Surveys based upon the "Guide for Commissioning Oral Surgery and Oral Medicine." A QR Code was created to allow patients to access the survey and paper alternatives were also available. Following every treatment appointment, patients were offered the opportunity to complete the surveys across two sites.
Results: Sixty-four responses were received from 26th February 2023 to 31st May 2023. Of these 95.3% were received using QR codes and 4.7% were received using the paper format. The patient's assess-

ment appointment was conducted using a face-to-face appointment for 93.75% of respondents, whereas 6.25% were remote. All respondents felt involved in their treatment decision, received information on risk and benefits and were able to ask questions. Furthermore, all respondents also reported their pain and anxiety was managed well during the procedure, that they received appropriate aftercare advice and were given emergency contact details. Where applicable all patients reported receiving information about medication side-effects.
Conclusion: Collecting PREMS using QR Codes appears to be an effective method of collecting patient feedback, without exhausting resources and with good patient compliance. This study also evidences the excellent quality of our service. Consideration should be given to expanding PREMS to collect further data on areas on interest.

Keywords: Feedback, PREMS, QR Codes, Patient, Oral Surgery

ARTIFICIAL INTELLIGENCE AND MACHINE-LEARNING IN CRANIO MAXILLO-FACIAL SURGERY: OUR EXPERIENCE

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Objectives: The practice of surgery requires making rapid and complex decisions while managing the sometimes-uncertain health consequences for patients. In this regard, Artificial Intelligence (AI) have improved the surgeon's southerly activity in all phases of patient management: screening, diagnosis, surgical procedure, and follow-up. It is specified how AI represents a modern technology with the ability to perform a task reserved for humans: learning, perception, reasoning, recognition. Machine learning (ML) a subdiscipline of AI, then, aims to design computer models capable of performing a task without having been explicitly programmed to do so. This type of learning is regularly employed in healthcare because of the complexity of data and high heterogeneity of patients.
The purpose of our study involved evaluating the effectiveness of ML in maxillofacial surgery.
Methods: ML capabilities were explored in several areas: trauma, oral surgery, and oncology to obtain an automated detection of maxillofacial fractures, to differentiate cystic lesions of the jaws, salivary gland tumors, and identify lymph nodal metastases in early stage of tongue cancers. The parameters analyzed regarded radiomic features extracted from MRI or CT associated then with inflammatory biomarkers obtained from blood sampling. Univariate analyses with nonparametric tests and multivariate analyses with machine learning approaches were used to validate the protocol.
Results: All clinical outcomes variables showed statistically significant differences ($p < 0.05$) in the Kruskal–Wallis test on median values. The multivariate analysis permitted to identify in each research field the best combinations of features and clinical parameters with a mean of 84% accuracy, 73% sensitivity, and 89% specificity.
Conclusion: In our experience, the AI may represent a valid support system for diagnosis, therapeutic decision, preoperative planning, or prediction of the outcome. However, there are still some challenges particularly in terms of ethics and data protection, to offer an augmented medicine.

Keywords: Artificial Intelligence, Machine-learning, Inflammatory Biomarkers, Traumatology, Head-Neck Oncology, Oral surgery

ANCHORING AND SUTURING OF THE SCHNEIDERIAN MEMBRANE- AN IMPORTANT TOOL FOR SELECTED CASES OF LARGE PERFORATIONS

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Background: The most frequent complication encountered while performing sinus floor elevation augmentation is membrane perforation. The incidence of this complication has been reported to span from 10% to 56%. A vast array of techniques have been reported to manage the different types of perforations.
Objective: The objective of the present study is to report on a modification of a previously published procedure that can be used for repair of large, superiorly based Schneiderian membrane perforations.
Methods: 11 patients undergoing sinus floor elevation augmentation via the lateral window approach, were diagnosed with a superiorly based, large (>1cm) membrane perforation. In order to correct the perforation, two small holes were made through the superior aspect of the bony window and the membrane was fixed with resorbable sutures through these holes. Next, a large (30*40mm) resorbable collagen membrane was inserted, following Xenograft filling, with or without dental implants.
A step by step procedure and literature review is presented.
Results: A total of 11 large perforations were treated via the described approach with no reported complications.
Conclusions: when thickness of the membrane and location of the perforations permit, anchoring the perforated membrane is an important tool in the surgical armamentarium. Fixing the membrane to bone, achieves integrity, thus, enabling to minimize secondary complications and maintaining the normal function of the sinus.

PTOSIS OF FACIAL SOFT TISSUE: A QUANTITATIVE ANALYSIS USING 3D FACIAL SCAN APP FOR SMARTPHONE

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Objectives: Although the modifications of the aging face have been widely described, to the best of our knowledge, there are no studies

that quantitatively analyze the degree of soft tissues facial ptosis.
Materials & Methods: Using a specific smarthphone application, the faces of a heterogeneous group of volunteers were scanned and studied with the aim to virtually measure the entity of facial ptosis. Two facial scans, upright and supine, were performed by using the Bellus3D Face app for iPhone in a sample of 60 volunteers. We virtually superimposed the two scans, and then, we calculated the discrepancy between them through the Geomagic Design X 3D software. A multivariate regression statistical model was used to ana- lyze the correlation between the mean discrepancy values compared to three main variables: age, BMI and gender. Mean
Results: Ptosis increases with age (coeff. = 0.02; 95% CI = 0.01–0.02, p \ 0.001), BMI (coeff. = 0.03; 95% CI = 0.01–0.05; p \ 0.001) and has been found higher in females (female versus male: coeff. = 0.22; 95% CI = 0.13–0.31; p \ 0.001).
Conclusion: The method we used allowed us to measure the degree of ptosis, and to make a complete morphological study of the effect of gravity on the facial surface in a very accurate, low cost and easily reproducible way.

POSITIVE EFFECT OF 635 NM LOW-LEVEL LIGHT THERAPY ON POST-OPERATIVE HEALING OF SECONDARY CHRONIC OSTEOMYELITIS OF THE JAWS: PRELIMINARY RESULTS OF A RANDOMIZED PROSPECTIVE STUDY

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Abstract: Introduction: Osteomyelitis of the jaws is a common disease of the maxillofacial region. The goal of each treatment modality for osteomyelitis is to alleviate pain, reduce infection, inhibit the progression of the disease, and induce bone and mucosal healing. Besides antibiotic therapy, surgical management, and oxygen hyperbaric therapy new therapeutic strategies for the treatment of osteomyelitis are developed. One of the novel approaches is photobiomodulation therapy, or Low-Level Light Therapy (LLLT).
Material and methods: After surgical treatment, test group patients (n=4) were treated with LLLT for five sessions with an extraoral pulsed 635 nm LED lamp (Repuls7, Repuls Lichtmedizintechnik GmbH, Austria), maximum output power: 140 mW/cm^2, frequency: 2,5 Hz, duty cycle: 50%. Clinical achievement and patient pain perception (via VAS score) were evaluated at 1, 3, and 6 months follow-up appointments and compared with control group (n=4) patients, treated with standard therapy.
Results: At 3 and 6 months clinical achievement was better in patients treated with LLLT. Pain and discomfort resolution was significantly greater in the experimental group.
Conclusions: Taking into consideration the results of this study it can be concluded that low-level light therapy (LLLT) improved the clinical outcome of surgical and medical treatment of secondary chronic osteomyelitis of the jaws. Also, pain and discomfort were significantly reduced in patients treated with LLLT.

Keywords: low-level light therapy, infection, osteomyelitis, regeneration, healing.