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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 ± 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

TECHNOLOGY LONG TERM COMPLICATIONS 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, time and pathology. With understanding of the multidisciplinary situation, we can offer the optimal treatment plan with minimal disturbance to the quality of life of the patients.

Material and Methods: 182 Patients were treated in the Maxillofacial clinic of Rhinology and Oral and Maxillofacial Surgery, a tertiary care center between the years 2019-2022. The patients were treated with a surgical procedure, with or without sinus lift, with or without bone grafting, from the bone graft and the bone grafting. The time from the initiation of the nasal and sinus disease was collected. Demographics, co-morbidities, prior surgery, and dental implants examination were evaluated.

Results: Of the 182 patients, 25% had sinus augmentation, 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 monolateral orbital reconstruction were included to verify the accuracy of the reconstruction. Patients were stratified based on type of reconstruction used and the Jaquiere 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 Jaquiere class I, 89 class II, 68 class III, 33 class IV e 4 class V. 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 assess 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, adenotonsillar 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.