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Scientific papers ERCEDDAR part 1

Trabajos científicos ERCEDDAR parte 1

1. Evolutionary study of different types of TMJ prosthesis: clinical case reports

Estudo evolutivo dos diferentes tipos de prótese de ATM: relato de casos clínicos

Estudio evolutivo de diferentes tipos de prótesis de la ATM: reportes de casos clínicos

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The work aims to research the evolutionary study of different types of temporomandibular joint prosthesis. The TMJ can be affected by lesions that alter its morphology and compromise its function, sometimes requiring resection or reconstruction. The reconstruction of this joint uses a total prosthesis in patients with specific conditions and pathology. In this way, the research is directed to the study objective in defining the prostheses used in patients with pathological conditions in the TMJ. A qualitative research of exploratory nature was carried out aiming at scientific deepening in order to delimit conditions that can create dysfunction and/or destruction of the mandibular condyle joint up to the glenoid fossa. Many studies still need to be carried out to establish whether these prostheses efficiently and permanently supply the ideal stomatognathic physiology.

Keywords: temporomandibular joint, TMJ, prostheses, reconstruction.

2. Odontogenic cyst and keratocyst in a middle-aged patient: case report

Cisto odontogênico e ceratocisto em paciente de meia-idade: relato de caso

Quiste odontogênico y queratoquiste en un paciente de mediana edad: reporte de caso

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A cyst is a pathological cavity lined with epithelium and when associated with a dental organ it is called odontogenic cyst. These cysts are classified as developmental cysts. Keratocyst is a cyst with a high recurrence rate and uncertain etiology that can be uni or multicystic. The present work reports the case of a middle-aged man with left submandibular edema, radiographic images compatible with cystic aspect, bilocular, on the left side of the mandible. The patient had a submandibular edema with fluctuation point, feverless and painless. After diagnosis, the surgical treatment consisted of enucleation, anatomic pathology exam and endodontics. Due to keratocysts' high recurrence rate, its incomplete removal is not recommended as a cystic neof ormation can lead to bone destruction, which is why follow-up is essential to ensure its complete resolution. Reinterventions are not rare. Decompression can also be a treatment option when its size is so large that its removal causes major structure impairment or fracture.

Keywords: keratocyst, decompression treatment, odontogenic cyst.

3. Odontogenic keratocyst – case report

Keratocisto odontogênico – relato de caso

Queratoquiste odontogênico - reporte de caso

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Keratocyst is an odontogenic development cyst with a high potential for recurrence. Its highest incidence is in the mandible, around second and third decades and can cause dislocation of teeth. This work presents a case of keratocyst treated with decompression. A 19-year-old leucoderma female patient was seen at the Dental School of UFPel-RS with a history of recent wisdom tooth extraction attempt. With only a periapical view, the professional

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did not see the cyst distal to the tooth (38), and when trying to extract the tooth, it dislocated into the cyst, a fact confirmed by the panoramic radiograph requested afterwards, which showed an extensive radiolucent area covering the retromolar region, ascending branch to the condylar region and the tooth inserted into the lesion. It was performed local intervention with removal of the bone window, incisional biopsy of the cystic capsule and placement of a decompression apparatus due to the risk of mandible fracture (extensive area). Biopsy confirmed the diagnosis of keratocyst. The apparatus remained for one year, requiring some maintenance interventions. Radiographic follow-up showed intense bone neoformation, lesion reduction and displacement of the involved dental element to its original location, when extraction with total enucleation and curettage was performed. The new biopsy showed an inflammatory cyst, without the original characteristics of the initial lesion. Control radiographs were taken after 1 month, 3 months and 16 years, with complete remission of the lesion. The decompression technique adopted proved to be of low cost and effective in reducing this kind of injury. We emphasize the importance of imaging exams (CT and X-ray) covering adjacent structures that are essential for proper surgical planning.

Keywords: keratocyst, odontogenic cyst, decompression technique.

4. Ameloblastoma in maxilla: literature review and case report

Ameloblastoma em maxila: revisão de literatura e relato de caso

Ameloblastoma en el maxilar: revisión de la literatura y reporte de caso

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Ameloblastoma is a tumor that, despite being rare as it represents only 1% of tumors in the maxilla and mandible region, is also the second most common tumor of odontogenic origin. The objective is to review the literature on ameloblastoma, its prevalence, regions most affected, its characteristics and types of treatment and to emphasize the advantages of gathering both specialties, head and neck surgery and oral and maxillofacial surgery, for the treatment. About 85% of ameloblastomas affect the mandible and 66% of the cases affect the posterior mandibular region, growing slowly but invasive. When the maxilla is affected the tumor tends to expand to the oral region and can invade the nasal floor. It has a relapse rate of 70% when surgical treatment is incomplete. In this case report, a male patient presented an ameloblastoma in maxilla (right side). The treatment consisted of resection surgery by a head and neck surgeon and an oral and maxillofacial surgeon. A Weber-Ferguson access was performed and the right hemi maxillectomy was then finalized, enabling to preserve the infraorbital region, nasal mucosa, posterior wall and roof of maxillary sinus. A more aggressive surgical approach is recommended to avoid recurrences, and it is up to the surgeon to choose the best approach. The combined work of head and neck surgery with oral and maxillofacial surgery is extremely important

to provide the best treatment and prognosis for the patient, by combining the different views of both areas.

Keywords: hemimaxillectomy, ameloblastoma, tumor.

5. Complex odontogenic infections - literature review and case report: cervical abscess

Infecções odontogênicas complexas - revisão da literatura e relato de caso: abscesso cervical

Infecciones odontogénicas complejas - revisión de la literatura y reporte de caso: absceso cervical

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Odontogenic infections are characterized by the spread of the infectious process to the tissues and fascial spaces of the head and neck region. These infections have two origins, periapical and periodontal. It can become complex when progressing to cervical and cerebral abscesses, mediastinitis, thrombosis of the cavernous sinuses, sepsis and even death. These pathologies require immediate care to avoid possible systemic involvement of the host. The present study is a literature review and case report treated at the Santa Casa de Valinhos Hospital, by the oral and maxillofacial surgery and traumatology team of Ceddar. Patient P.H.F, male, 51 years old, with left submandibular/cervical odontogenic abscess, presenting leukocytosis of 20,120/mm³ and left deviation. He underwent empirical medication with ceftriaxone and clindamycin, performed cervical drainage in the operating room and Penrose drain placement. Culture and antibiogram examination present coagulase-negative *Staphylococcus* and *Streptococcus viridans*. Complete blood count analysis was performed daily to evaluate regression of the infection. Patient was discharged three days after drainage, presenting leukocytes 8,770/mm³. Early diagnosis prevents the spread of infection and also a treatment with antibiotic therapy and drainage is essential for infection control.

Keywords: antibiotic therapy, infection control, cervical abscesses.

6. Reconstruction of the right unilateral temporomandibular joint using a customized prosthesis composed of biphasic calcium phosphate bioceramic

Reconstrução da articulação temporomandibular unilateral direita através da utilização de prótese customizada em hidroxiapatita

Reconstrucción de la articulación temporomandibular unilateral derecha mediante una prótesis personalizada de biocerámica de fosfato cálcico bifásico

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Bone reconstructions caused by injuries of many different etiologies or anomalies, whether congenital or acquired, that involve the temporomandibular joint can be challenging. The

treatment commonly involves the use of graft bone of different types, such as costochondral, sternoclavicular, iliac crest, fibular, coronoid metatarsal or implant denture, composed of different materials-metals and bio ceramics within the bioengineered tissue (Mohan et al, 2014). This work aims to present a clinical case report of reconstruction of the unilateral temporomandibular joint using a customized biphasic calcium phosphate bio ceramic prosthesis. The patient was referred to the Maxillofacial Surgery and Traumatology Service on São João de Deus Health Complex, Divinópolis-MG, with a diagnosis of odontogenic keratocyst. The diagnosis was confirmed in 2018 with an incisional biopsy. The patient underwent surgical resection of hemimandibulectomy (right side), involving the condyle, ramus, and mandibular body. Primary rehabilitation was performed using a microvascularized fibular bone graft evolved with deficient vascularization. A new surgical intervention was performed to remove the bone graft. In 2019, a reconstruction with a customized prosthesis (biphasic bio ceramic) was performed on the right temporomandibular joint. The surgical procedure was performed, obtaining a satisfactory result, considering the functional and biocompatibility characteristics of the material.

Keywords: customized prosthesis, bio ceramics, hydroxyapatite.

7. Advancement of the mental region with a PMMA prosthesis. Clinical case report

Avanço da região mental com prótese de PMMA. Relato de caso clínico

Avance de la región del mentón con una prótesis de PMMA. Reporte de un caso clínico

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The chin region can present what is called hypodevelopment, a deformity that has different etiologies. It is, however, possible to perform reconstructive surgery in this region. Surgery is a procedure that aims to improve the aesthetic and functional profile of the patient with some deformity in the mental region. The aim of this study is to develop a clinical case report of a surgical procedure for compensation (advancement) of the esthetic profile in the mental region using a solid prosthetic approach fixed in surgical polymethylmethacrylate (PMMA). Discussing its technique, indications, contraindications, risks, and complications, pre and postoperative, to present specific aspects of the case and add to theoretical knowledge. This is a clinical case report that proposes a surgical procedure to advance the chin with the fixation of a solid surgical PMMA prosthesis. Clinical and theoretical aspects will be observed from the anamnesis, preoperative exams, the surgical course and postoperative observations. The case consisted of a

female patient, 25 years old, Caucasian, with mild mandibular retrognathism, with small mental projection, but orthodontically compensated. **Results:** promotion of esthetics with improvement in the facial profile, as well as improvement in the positioning of the depressor labrum muscles and the mental labrum and cervicofacial angles. **Conclusion:** to make this type of treatment for skeletal hypodevelopment more evident to the maxillofacial surgical class, as an alternative, as well as aesthetic refinement of orthognathic surgeries.

Keywords: PMMA prosthesis, retrognathism, mental projection.

8. Mandibular fracture associated with third molar extraction. Integrative review

Fratura mandibular associada à extração do terceiro molar. Revisão integrativa

Fractura mandibular asociada a la extracción de terceros molares. Revisión integradora

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Third molar extraction is one of the most common procedures performed by maxillofacial surgeons in dental practices. They have a high prevalence of inclusion. When indicated, extraction can result in complications such as mandibular fracture. Several factors can cause this type of complication, such as: inadequate handling of involved tissues, error during the surgical technique, inadequate planning of the surgery, and also the inadequate use of instruments. This study aimed to analyze the experiences reported in the literature, with mandibular fractures related to third molar extraction, discussing the incidence and prevalence of trauma, its main causal factors and procedures performed. **Material and methods:** an integrative literature review was carried out to identify these experiences, reported in the four main health databases (PubMed/MEDLINE, CAPES journals, LILACS and SciELO), from January 2016 to March 2021. From 37,237 references found, 240 articles were analyzed, after applying the exclusion and inclusion criteria. Data collection and analysis indicated that postoperative fractures were more common than intraoperative fractures and occurred more frequently in the second and third weeks (57%). Intraoperative fractures were more frequent in females and differed from postoperative fractures. The occurrence of mandible fractures resulting from third molar extraction was multifactorial, with age, sex, angle, degree of impaction and pathologies contributing to the risk. The aim was to make the relevance of the topic more evident to the maxillofacial class in the implementation of the correct mechanisms to prevent this complication.

Keywords: third molar, fractures, mandibular.

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