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FACULDADE LUCIANO FEIJÃO

APRESENTAÇÃO

A Faculdade Luciano Feijão (FLF), localizada no município de Sobral, Ceará, destaca-se como uma instituição de ensino superior comprometida com a excelência acadêmica, a produção científica e o desenvolvimento regional. Sua missão contempla a produção, a sistematização e a socialização do conhecimento por meio da integração entre ensino, pesquisa e extensão, contribuindo para a formação de profissionais qualificados, críticos, criativos, éticos e reflexivos, preparados para atuar de maneira transformadora na sociedade.

No âmbito dessa trajetória, o curso de Odontologia fortalece o compromisso institucional com a formação de profissionais capacitados para atender às demandas da saúde bucal, por meio de metodologias de ensino inovadoras, da integração entre teoria e prática e do incentivo à produção e à disseminação do conhecimento científico.

Nesse contexto, a Faculdade Luciano Feijão promoveu o I Simpósio Internacional Maxilofacial Interligas (SIMI), um evento científico voltado à integração acadêmica, à atualização profissional e ao intercâmbio de conhecimentos nas diversas áreas da Odontologia, com ênfase na anatomia de cabeça e pescoço, na radiologia e imaginologia, na cirurgia oral e maxilofacial e na endodontia.

Organizado pelas ligas acadêmicas Liga Acadêmica de Anatomia de Cabeça e Pescoço (LAAC), Liga Acadêmica de Radiologia e Imaginologia (LIRA), Liga Acadêmica de Cirurgia Oral e Maxilofacial (LACOM) e Liga Acadêmica de Cuidado Integral em Endodontia (LACIE), o SIMI reuniu uma programação científica diversificada, composta por palestras ministradas por especialistas nacionais e internacionais, arenas temáticas, atividades práticas do tipo *hands-on*, oficinas interativas e apresentações de trabalhos científicos, com possibilidade de publicação em periódico científico de língua inglesa.

A iniciativa proporcionou um espaço de compartilhamento de experiências, aprofundamento teórico-prático e aproximação entre estudantes, docentes, pesquisadores e profissionais da área odontológica. Além disso, contribuiu para o fortalecimento da pesquisa, da inovação e da formação acadêmica, estimulando o pensamento crítico e a atualização diante dos avanços científicos e tecnológicos relacionados à saúde bucal.

Realizado na Clínica Odontológica da Faculdade Luciano Feijão, em formato híbrido, o I SIMI consolidou-se como uma iniciativa de valorização da produção científica e de incentivo à integração entre ensino, pesquisa e extensão, reafirmando o compromisso institucional com a disseminação do conhecimento e o desenvolvimento da Odontologia.

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RELATIONSHIP BETWEEN CD44 EXPRESSION AND THE PROGNOSIS OF ORAL SQUAMOUS CELL CARCINOMA

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Introduction: Squamous cell carcinoma (SCC) accounts for about 90% of oral cavity cancers. Tumor stem cells (TSCs) and their biomarkers, such as the membrane glycoprotein CD44, have been investigated due to their role in carcinogenesis, progression, metastasis, and therapeutic resistance. Although immunohistochemical studies indicate an association of CD44 with tumor progression, its role in oral carcinogenesis and its prognostic impact remains unclear. **Objective:** The present study aims to evaluate the correlation of CD44 expression with the prognosis of oral SCC. **Methodology:** For this purpose, articles indexed in the PubMed database were searched using the MeSH terms: (CD44) AND ("oral squamous cell carcinoma" OR "OSCC" OR "oral tongue squamous cell carcinoma" OR "oral cavity squamous cell carcinoma" OR "squamous cell carcinoma of the mouth" OR "squamous cell carcinoma of head and neck"), resulting in 359 articles. After selection, primary human studies published in the last 10 years with immunohistochemical analysis were included, comprising 21 articles selected for the review. These studies cover 1,627 oral SCC samples. **Results:** Of the 9 studies that analyzed CD44 expression in relation to histopathological differentiation grade, 7 showed decreased expression with lower differentiation, while 2 associated overexpression with poor tumor differentiation. Regarding overall survival, 6 studies indicated that CD44 overexpression is linked to lower survival. Five studies related increased expression to advanced tumor staging. In lymph node metastasis, 3 of 4 studies found a positive association with elevated CD44 expression, while 1 study presented opposing results. All 3 articles that evaluated resistance to radiotherapy suggested a contribution of CD44 to this phenomenon. Other findings included 3 studies associating overexpression with high tumor budding activity, 2 with small cell nests, and 1 with increased tumor angiogenesis. In summary, of the 21 studies, 11 related increased CD44 expression to worse prognosis, 5 linked decreased expression to worse prognosis, and 3 presented divergent results depending on variables. One study found no correlation, and another did not identify statistical significance. **Conclusion:** These data indicate the potential of CD44 as a prognostic marker but emphasize the need for methodological standardization. Although CD44 appears relevant in the progression of oral SCC, further standardized studies are needed to validate its clinical application and clarify conflicting results.

Keywords: Hyaluronan Receptors; Neoplastic Stem Cells; Squamous Cell Carcinoma of Head and Neck; Mouth.

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ORAL HEALTH PROMOTION FOR QUILOMBOLA ADOLESCENTS: EXPERIENCE REPORT FROM THE “SORRISO NEGRO” PROJECT

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Introduction: Promoting oral health among adolescents demands innovative and culturally sensitive approaches, particularly in traditional communities such as the quilombolas, who face historical barriers to healthcare access. Within this context, the *Sorriso Negro* Extension Project - Saúde Bucal das Comunidades Rurais Quilombolas de Sobral e Municípios Vizinhos (Federal University of Ceará, Sobral Campus) - implements preventive, educational, and care-based actions grounded in Minimally Invasive Dentistry and Popular Health Education. The latter, inspired by Paulo Freire’s pedagogy, fosters a horizontal, dialogic, and contextualized learning process in which knowledge is co-constructed from local realities, encouraging youth engagement and sustainable healthy practices.

Objective: This experience report describes a game-based health education activity conducted with 13 adolescents from the Quilombola community of Batoque, Pacujá-CE. **Methodology:** The activity involved a quiz-style competition with 15 general oral health questions, designed both to assess participants’ prior knowledge and to stimulate collective reflection and learning. **Results:** The ludic format promoted active participation, peer interaction, and reinforcement of essential concepts, including proper oral hygiene techniques, flossing, healthy eating habits, and consistent self-care. The adaptation of content to the community’s cultural and social context proved crucial for receptivity and comprehension. Results revealed strong youth engagement, knowledge exchange, and improved retention of key messages. **Conclusion:** By valuing local knowledge and fostering a participatory learning environment, the project not only disseminates information but also empowers adolescents as active agents in their own health and in community well-being. Sustained initiatives of this kind are essential to address oral health inequities, underscoring the need for strategies that integrate cultural competence with social equity. This experience reinforces the transformative potential of university extension projects in bridging academic knowledge and community needs, advancing social change, health equity, and anti-racist professional training in dentistry.

Keywords: Oral Health; Health Promotion; Quilombolas.

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ANALYSIS OF SCIENTIFIC EVIDENCE ON THE APPLICATION OF NEXT-GENERATION SEQUENCING IN CHARACTERIZING THE ORAL MICROBIOME OF PATIENTS WITH ACTIVE CARIES

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Introduction: Dental caries remains a prevalent condition affecting individuals across all age groups and is driven by dysbiosis within the oral ecosystem, leading to imbalances in microbial composition and function. Next-Generation Sequencing (NGS) has transformed microbiological analysis by enabling the identification of microorganisms that are difficult or impossible to culture. Through longitudinal monitoring of cariogenic and protective species, NGS offers a means to evaluate treatment efficacy, anticipate recurrences, and tailor preventive strategies to an individual's unique microbiological profile. **Objective:** This study aimed to analyze the scientific evidence in the literature regarding the application of NGS in the characterization of the oral microbiome in patients with active dental caries, emphasizing its potential as a tool for microbiological monitoring and long-term clinical management. **Methodology:** A structured literature search was performed in the PubMed database using the terms "Oral microbiome", "Dental caries" and "Next-Generation Sequencing" combined with the Boolean operator "AND." Filters were applied to include studies published in the last five years, in English, with freely available full texts. The search retrieved 49 articles, which were screened by title and abstract. Studies employing methodologies other than NGS were excluded. Ten eligible articles were selected for full-text review. **Results:** The reviewed studies consistently demonstrate that NGS enables precise identification of microbial taxa associated with the carious process at the individual level, providing a functional assessment of the oral microbiome and tracking the patient's response to therapeutic interventions. This technology surpasses the limitations of culture-based methods, offering a comprehensive view of microbial composition and functional shifts. **Conclusion:** Therefore, NGS represents a significant advancement in the understanding of dental caries within a dysbiotic framework. Its application shows strong potential for integration into clinical monitoring, facilitating personalized preventive strategies and treatment planning. Nonetheless, routine implementation is hindered by technical and economic constraints, as well as the need for clinical validation of specific biomarkers. Despite these challenges, NGS stands as a promising resource in the evolution of evidence-based dentistry and precision medicine.

Keywords: Microbiology; Dental Caries; Dental Caries Activity Tests.

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THE IMPORTANCE OF UNIVERSITY EXTENSION IN SOCIETY AND ITS RELEVANCE TO THE TRAINING OF FUTURE HEALTH PROFESSIONALS: A LITERATURE REVIEW

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Introduction: Extension is an important pillar that supports university education, alongside research and teaching, as it provides contact with the community and the opportunity to apply theoretical knowledge disseminated within the educational institution. Therefore, valuing this discipline is essential, as it serves as a driver of experiential knowledge, contributing to the professional and human development of students. **Objective:** To analyze the importance of university extension in students' curricula, highlighting its impact on the community and its relevance to the training of future health professionals. **Methodology:** A bibliographic search was conducted in August 2025 in the Virtual Health Library (BVS) and Scielo databases, using the following descriptors: "Dentistry," "University extension," "Health," and the Boolean operator "AND." A total of 38 studies were found in a free search, from which 5 were selected for the present study. Inclusion criteria were studies published in the last 5 years, in Portuguese, complete, and open access; exclusion criteria included publications older than 5 years, incomplete studies, closed-access materials, or those outside the theme. **Results:** University extension is seen as a fundamental discipline for future health professionals, as it encourages the practice of theories learned in the classroom, fosters contact with the community and the economic reality of public services, and stimulates critical thinking. Moreover, the local community also benefits from scientific knowledge that can help solve health problems and be adapted to their daily lives, while also offering students a range of practical skills. **Conclusion:** Extramural activities promote an exchange of knowledge between the community and the university, breaking elitist paradigms and the social exclusion of knowledge, reframing the outdated view that knowledge is unidirectional and that the population is merely a recipient. Scientific knowledge should be integrated into local daily life as an improvement rather than as a transformative agent, reinforcing that activities outside the academic environment are indispensable for improving community living conditions and for the training of health professionals.

Keywords: Health promotion; Professional practice; Public Health Practice.

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USE OF COMBINED THERAPIES IN THE GLABELLA REGION: CASE REPORT

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Introduction: Combined treatment for the glabella region can include various techniques adapted to the needs of each patient. The glabella is a common area of aesthetic concern due to expression lines and wrinkles caused by the repeated contraction of facial muscles such as the corrugator and procerus. The combination of botulinum toxin, ATA (trichloroacetic acid) peeling, hyaluronic acid fillers and signal peptides has proved effective in treating the signs of facial ageing. **Objective:** To report a clinical case in which combined therapies were used to treat static wrinkles in the glabella region. **Methodology:** A 59-year-old male patient sought care in search of a solution for static wrinkles in the eye area and glabella. On clinical examination, deep wrinkles were observed in the glabella, and a combination of therapies was suggested in subsequent sessions. Initially, botulinum toxin (Dysport-Galderma) was applied to the upper third of the face, including the glabella and orbicularis. On return, the toxin was reapplied to the corrugator muscles of the eyebrow. Next, the first glabella filling session began with 0.5 mL of Biogelis Volume associated with Matrixyl. Before filling, Matrixyl was applied, followed by filling with reconstituted hyaluronic acid. Next, a 20% ATA peel combined with 10% Retinoic Acid was applied to the glabella and frontal regions. In the second session, the glabella was filled with 0.5 mL of Biogelis Volume + Matrixyl, resulting in a considerable improvement in static wrinkles. **Results:** The combination of these therapies provided an innovative and multifaceted approach to facial rejuvenation, especially in the glabella. Botulinum toxin reduced dynamic wrinkles, ATA peeling promoted the renewal of the epidermis and superficial dermis, hyaluronic acid filled static wrinkles and Matrixyl strengthened the dermal structure. As a result, there was a significant improvement in the appearance and quality of the skin. **Conclusion:** The combination of botulinum toxin, ATA peeling, hyaluronic acid and Matrixyl proved to be an effective alternative for minimizing static wrinkles in the glabella region, offering satisfactory results and being a safe option for facial rejuvenation.

Keywords: Glabella Filling; ATA Peels; Toxin in the Glabella Region.

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LASER THERAPY AND VITAMIN SUPPLEMENTATION IN THE CLINICAL MANAGEMENT OF PARESTHESIA IN FACIAL TRAUMA: A LITERATURE REVIEW

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Introduction: Paresthesia is a change in sensitivity that can cause tingling, numbness, or partial loss of sensation. This condition mainly affects the inferior alveolar nerve and can occur after certain dental procedures, such as third molar extractions, dental implant surgeries, and orthognathic surgeries. **Objective:** The aim of this study is to address the clinical management of paresthesia in facial trauma, invoking the support of therapeutic methods such as low-level laser therapy and vitamin B supplementation. **Methodology:** This is a narrative review of the literature carried out using the PubMed database. Four recent studies addressing paresthesia related to oral surgeries and their treatment methods were selected, focusing on laser therapy and vitamin B. Studies from the last seven years addressing paresthesia in dentistry and its management were included, while those that did not fit were excluded in this focus. The search was conducted using the descriptors: 'paresthesia', 'treatment', and 'facial trauma'. **Results:** The analyzed studies revealed that treatment with low-level laser, combined with vitamin B supplementation, was effective, with complete symptom reduction in about 3 weeks. Additionally, other studies suggest options such as acupuncture, physical therapy, and pharmacotherapy, but emphasize that laser therapy promotes nerve regeneration in a safe and non-invasive manner. Furthermore, appropriate surgical planning remains essential for the prevention of paresthesias. **Conclusion:** The clinical morbidity caused by paresthesia justifies the adoption of effective treatments for this condition. The combination of laser therapy with vitamin B proved to be a safe, low-cost approach with good results in sensory recovery, representing a promising alternative in Dentistry.

Keywords: Paresthesia; Facial trauma; Treatment.

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ORAL MANIFESTATIONS OF RHEUMATOID ARTHRITIS: A LITERATURE REVIEW

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Introduction: Rheumatoid Arthritis (RA) is an autoimmune inflammatory disease that affects the joints, including the temporomandibular joint (TMJ), leading to pain, limited movement, and dysfunction. In the oral cavity, it can cause xerostomia, oral burning sensation, halitosis, caries, and periodontal disease. These manifestations are often overlooked. The collaboration between a dentist and a rheumatology team is essential for early diagnosis and prevention of complications. **Objective:** To analyze the main oral manifestations associated with RA through a literature review, highlighting the importance of recognizing these clinical changes for appropriate dental care. **Methodology:** Based on the proposed objective, a literature review was conducted with a bibliographic survey performed in July 2025, by selecting articles from the VHL database. The search strategy "(Arthritis, Rheumatoid) AND (Oral Manifestations) AND (Dentistry)" was used. This keyword combination yielded 29 articles. The inclusion criteria were full-text articles published between 2020 and 2025, in any language. After applying the exclusion criteria, which were articles outside the publication period and incomplete or off-topic texts, a total of 4 articles were selected for analysis. **Results:** Among the orofacial manifestations of RA, changes in the TMJ were predominant, with Temporomandibular Disorder (TMD) being the most frequent clinical finding. Patients presented with symptoms such as chronic orofacial pain, limited mandibular movement, morning stiffness, and difficulty opening their mouth. Additionally, complaints associated with malocclusion, tooth sensitivity, and facial neuralgias were reported, compromising essential functions like chewing, swallowing, and speech. The absence of an early diagnosis can result in irreversible changes, worsening the condition and making the clinical picture more complex. **Conclusion:** Therefore, it can be concluded that rheumatoid arthritis must be diagnosed and treated early, ensuring the patient receives an appropriate approach that prevents the disease from worsening and minimizes future severe complications. Furthermore, it is essential to invest in more research to expand and improve the possibilities for therapeutic interventions.

Keywords: Rheumatoid Arthritis; Orofacial Manifestations; Dentistry.

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THE IMPORTANCE OF AESTHETIC DENTISTRY IN PATIENTS SELF ESTEEM AND QUALITY OF LIFE

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Introduction: The pursuit of an increasingly pleasing and socially accepted appearance has been gaining increasing ground and social recognition, directly impacting people's self-esteem and quality of life. Therefore, aesthetic dental health plays a fundamental role, as appropriate dental treatment tailored to each patient's needs provides more harmonious and healthy smiles. This impacts not only the physical well-being but also the psychological aspects of patients. **Objective:** Therefore, this study aims to evaluate the importance of aesthetic dentistry on patients' self-esteem and quality of life through a literature review. **Methodology:** A literature review was conducted in July 2025, selecting articles from the PubMed and Scielo databases using the search strategy "(Aesthetics)" AND "(self-esteem)" AND "(quality of life)" AND "(dentistry)". By applying keyword cross-referencing, 261 articles were found. The search included full-text articles published between 2020 and 2025, in English, relevant to the topic, and available. After applying the exclusion criteria (articles outside the publication range, incomplete texts, reviews, and off-topic articles), a total of 41 articles were found. After reading the abstracts and full texts, six articles remained for analysis. **Results:** The studies showed that orthodontic and Ortho surgical treatments promoted significant improvements in self-esteem, oral function, dental aesthetics, and oral health-related quality of life of the individuals evaluated. Adolescents and adults reported reductions in negative psychosocial impacts after treatment. Thus, the studies showed a negative correlation between aesthetic impact and self-esteem. Another point highlighted is that financial barriers and dissatisfaction with appearance still influence the search for treatment. **Conclusion:** Given the above, we can conclude that cosmetic dentistry plays a fundamental role in promoting patients' self-esteem and quality of life. Dental treatments contribute to significant aesthetic, functional, and psychosocial improvements. However, barriers, such as financial ones, still exist that limit access to dental care for a significant portion of the population.

Keywords: Oral health; Psychological well-being; Image percept.

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THE IMPORTANCE OF EXTENSION PRACTICES TO PROMOTE ORAL HEALTH FOR CHILDREN IN SOBRAL/CE: AN EXPERIENCE REPORT

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Introduction: Extension practices play an essential role in health promotion. In the field of dentistry, they gain prominence by addressing the oral health of groups that require special attention, such as children. This experience report was carried out by students from the fifth semester of the Dentistry course at Faculdade Luciano Feijão, through actions carried out at the Social Assistance Reference Center (CRAS) in the Dom José neighborhood, in the municipality of Sobral, Ceará. The activities were implemented between March and June 2025. **Objective:** The extension activities aimed to raise awareness among children aged between 5 and 10 about oral disease prevention. **Methodology:** The methodology adopted was based on the shared construction of knowledge, according to the National Popular Education Policy, focused on Paulo Freire's methodology, which understands that education is done with the other and not for the other, based on the assumption that everyone has knowledge and that this knowledge must be shared among those involved. The class was divided into two groups that took turns every week to ensure continuity of activities. The work with the children began with a slide presentation on caries and periodontal diseases, highlighting the importance of brushing. Diverse pedagogical dynamics were then applied, such as: an activity in the form of a path on the floor, made with cardboard, in which the children advanced with each correct answer to questions related to oral health issues; simulated brushing with a mouth model, which rewarded participants who performed the procedure correctly with a certificate; and the 'myth or truth' dynamic, using little cards for interaction. During the interventions, it was observed that the children, who were initially shy and withdrawn, began to show greater interest and enthusiasm as the activities progressed. **Results:** The results obtained reinforce the importance of adapting intervention strategies according to the target audience, ensuring greater engagement. The interventions contributed to improving oral health, stimulating dialog and the collective construction of knowledge. This experience also highlighted the potential of playful activities in health promotion and favored the development of students, broadening their sensitivity and social commitment.

Keywords: Extension practices; Oral health; Popular education.

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CURRENT OVERVIEW OF DENTAL RESTORATIONS WITH DIGITAL FLOW INTEGRATION: LITERATURE REVIEW

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Introduction: Contemporary dentistry is undergoing a transformation driven by the adoption of digital workflows, which integrate intraoral scanners, CAD (Computer-Aided Design) software, and CAM (Computer-Aided Manufacturing) systems, such as milling machines and 3D printers. These resources emerge as an alternative to conventional methods, offering precision, clinical efficiency, reduced treatment time, and comparable or superior aesthetic results. With chairside systems, restorations can be fabricated in the office on the same day, avoiding external laboratory steps.

Objective: This paper aims to present a current overview of dental restorations obtained through milling and 3D printing, highlighting the characteristics, indications, and advances afforded by the digital workflow, through a literature review. **Methodology:** The search was conducted in the PubMed database, using the keywords milled resin, resin composite blocks, and CAD/CAM indirect restorations, including articles in English, published between 2015 and 2025, available in full, including systematic reviews and trials. Clinical trials and meta-analyses. Of the 37 articles found, 11 met the criteria and were fully analyzed. **Results:** The studies demonstrated that milling, using industrially polymerized blocks, provides excellent marginal adaptation, good mechanical properties, and color stability, as well as reduced antagonist wear and repairability. 3D-printed restorations, on the other hand, show promising potential but may exhibit lower strength and greater roughness when made with low-quality materials or low particle load. Both milling and 3D printing, when applied appropriately, reduce clinical time, increase accuracy, and enhance patient comfort, especially with the use of intraoral scanning. The incorporation of digital workflow into restorative dentistry represents a significant advance and should be widespread, provided it is accompanied by professional training for the correct indication and execution of the procedures.

Keywords: Dentistry; Technology; Extracoronary Dental Restorations.

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INTERACTIVE WORKSHOP: THE IMPACT OF ACTIVE METHODOLOGIES ON AWARENESS AND LEARNING ABOUT ODONTOGENIC CYSTS AND TUMORS.

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Introduction: Odontogenic cysts and tumors (OCTs) are common lesions in dental practice with the potential to cause significant oral health damage. Therefore, early and accurate diagnosis is essential for proper clinical management. In higher education, active methodologies are emerging as effective alternatives to enhance academic training, promoting student protagonism and stimulating the development of critical and practical competencies. **Objective:** This experience report aims to demonstrate the relevance of applying active methodologies in the teaching-learning process related to odontogenic cysts and tumors. **Methodology:** An educational workshop was developed, focusing on the radiographic characteristics of OCTs. It was coordinated by members of the Academic League of Imaging and Oral Radiology at Faculdade Luciano Feijão (FLF). The activity took place in the institution's main hall during class breaks, a strategy designed to broaden the reach of the participating public. The environment was themed and complemented by interactive activities, distribution of educational materials, and giveaways, aiming to facilitate the integration between theory and practice in a playful and stimulating manner. **Results:** The workshop's execution revealed high participation and engagement from both students and staff, stimulated by the thematic setting and interactive activities. The relevance of addressing this topic for the general population was observed, highlighting the initiative's potential to contribute to awareness and early diagnosis of OCTs. For students, the benefits of active methodologies were notable, facilitating the practical application of theoretical knowledge, resulting in greater content retention and better preparation for future clinical practice. The experience demonstrated the value of innovative approaches in academic training. **Conclusion:** The methodology employed proved effective both in consolidating the learning of the students who organized the event and in its social impact of clarifying the effects of OCTs to the general public.

Keywords: Radiology; Active teaching methodologies; Dentistry.

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ENDODONTIC MANAGEMENT OF A MOLAR WITH A C-SHAPED CANAL AND A ROOT PERFORATION: THE CONTRIBUTION OF CONE-BEAM COMPUTED TOMOGRAPHY

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Introduction: C-shaped canal molars represent a significant challenge in endodontic treatment due to their complex internal anatomy, which complicates both instrumentation and complete disinfection of the root canal system. The presence of a root perforation makes the treatment even more complex, requiring careful planning and the use of advanced technological resources. **Objective:** To report the endodontic management of a mandibular molar with a C-shaped canal and a root perforation, highlighting the role of cone-beam computed tomography (CBCT) analysis in diagnosis and therapeutic planning. **Case Report:** A female patient was referred for endodontic treatment of tooth 37 due to painful symptoms, after an emergency endodontic access had been performed previously. The initial periapical radiograph revealed the presence of fused roots and a periapical lesion. During coronal access, a furcation perforation was identified, in addition to C-shaped canal anatomy. Given this, a cone-beam computed tomography (CBCT) scan was requested for case planning, which revealed the presence of two main canals, with the distal canal being ribbon-shaped, both uniting in the apical third. The treatment was conducted with the aid of ultrasound to enhance disinfection, facilitate access to the main and accessory canals, and promote the removal of debris and obstructions. The protocol included ultrasonic irrigation with sodium hypochlorite and mechanized instrumentation with X1 Blue 25 and 40 files. The perforation was sealed with MTA, and after intracanal medication with calcium hydroxide, the obturation was performed with ultrasonic agitation of AH Plus Jet sealer, using the thermoplasticized gutta-percha technique. **Conclusion:** The combination of therapeutic planning with CBCT and the use of ultrasound during endodontic management was crucial for the treatment's success, promoting greater predictability and clinical safety. This report reinforces the importance of integrating three-dimensional imaging diagnostics and ultrasonic technologies in resolving highly complex endodontic cases, favoring the longevity of the treatment and the preservation of the tooth structure.

Keywords: C-Shaped Canal; Root Perforation; Cone-Beam Computed Tomography; Ultrasound.

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IMPACTOS OF THE COVID-19 PANDEMIC ON HOSPITAL DENTISTRY: A LITERATURE REVIEW

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Introduction: Hospital dentistry plays a fundamental role in the care of hospitalized patients, especially those in intensive care units (ICUs). The COVID-19 pandemic directly impacted this field, requiring changes in biosafety protocols and in the organization of hospital dental services.

Objective: To demonstrate the impacts of the COVID-19 pandemic hospital on dental practice, with an emphasis on biosafety and the reorganization of care, through a literature review. **Methodology:** A literature review was conducted through a bibliographic survey carried out in July 2025, using selected articles from the PubMed, Scielo, and Google Scholar databases. The search strategy applied was: “(Dental Staff)” AND “(Hospital)” AND “(COVID-19)”. After applying the keyword combination, 15 articles were found. The inclusion criteria were full-text articles, published between 2020 and 2025, in any language. After applying the exclusion criteria articles outside the publication range, incomplete texts, or those unrelated to the topic a total of 5 articles were selected for analysis.

Results: The studies revealed significant changes in hospital dental practice during the pandemic, highlighting the updating of biosafety protocols, the reorganization of patient care workflows, and the strengthening of multiprofessional collaboration. Economic impacts were also noted, mainly due to increased costs related to personal protective equipment (PPE). Furthermore, the articles emphasized the broad recognition of the importance of dentistry within the hospital setting, contributing to patient safety and the prevention of systemic complications. **Conclusion:** The COVID-19 pandemic drove important advancements in hospital dentistry, particularly regarding biosafety and the recognition of the dentist’s role in the hospital context. These changes enhanced the quality of care and patient safety, underlining the importance of continued professional development. However, further studies are needed to assess the long-term impacts.

Keywords: Dental Staff, Hospital; COVID-19.

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COMPOSITE RESIN AS AN AESTHETIC ALTERNATIVE FOR UNSATISFACTORY VENEERS: A CLINICAL CASE REPORT

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Introduction: Dental aesthetics has become increasingly valued in modern dentistry, especially in anterior teeth, where minimal changes can significantly impact the patient's smile. Among the restorative options, direct composite veneers stand out for their conservative approach, lower cost and ability to provide satisfactory aesthetic results. Over time, these restorations can show wear, color change, loss of shine or small fractures, compromising their function and aesthetics. In these cases, replacement with new veneers in the same material is an efficient, predictable and minimally invasive solution, especially when tooth structure is preserved. **Objective:** To report a clinical case in which composite resin was used, highlighting its clinical and aesthetic advantages in veneers to close diastemas in teeth 21, 22, 11 and 12, as well as the reanatomization of teeth 13 and 23. **Methodology:** A 21-year-old male patient sought dental care in search of a quick aesthetic solution for his anterior teeth. The clinical examination revealed the presence of resin veneers with excesses and aesthetic dissatisfaction reported by the patient. To resolve the problem, home whitening with 22% carbamide peroxide gel was initially carried out. After whitening and diagnostic waxing approved by the patient, restorative treatment with composite resin was started. **Results:** Replacement with new composite resin veneers improved the aesthetics of the smile, correcting its shape, color and brightness. The procedure was quick, practical and conservative, demonstrating the clinical ease and efficiency of the material. The patient was satisfied with the result and showed no sensitivity. Hygiene guidelines and regular follow-up were reinforced. **Conclusion:** Composite resin proved to be an effective and conservative alternative for replacing unsatisfactory veneers, with good aesthetic results and simplified clinical application. Its ease of handling and the possibility of direct adjustments reinforce its indication as a practical and affordable aesthetic solution.

Keywords: Composite resin; Dental esthetics; Restorations.

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DIAGNOSIS AND MANAGEMENT OF COMPOUND ODONTOMA ASSOCIATED WITH TOOTH RETENTION IN A YOUNG PATIENT: CASE REPORT

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Introduction: Odontomas are the most common odontogenic tumors and are characterized as malformations of dental tissues, organized, in the compound subtype, or disorganized, in the complex subtype. They are generally asymptomatic and diagnosed incidentally during childhood or adolescence through radiographic examinations performed for other purposes, and may lead to tooth retention. Their etiology remains uncertain, but factors such as local trauma, infections, developmental disorders and genetic predisposition have been suggested as possible contributors. Due to their benign nature, treatment involves conservative surgical removal, with a favorable prognosis and low recurrence rate. **Objective:** The present study aims to report a case of odontoma in a 15-year-old female patient who attended a Stomatology outpatient clinic for the investigation of the absence of teeth #11 and #12. **Case Report:** Clinically, prolonged retention of tooth #51 was observed. A cone-beam computed tomography scan was performed for evaluation, showing in the anterior maxillary, multiple hyperdense images resembling denticles, surrounded by hypodense halos, consistent with the diagnostic hypothesis of compound odontoma. Additionally, impaction of tooth #11 and agenesis of tooth #12 were also observed. Surgical removal of the lesion was then performed under terminal infiltrative anesthesia, with surgical access through both the buccal and palatal aspects, as the denticles extended across both bone plates. An intrasulcular incision extending from tooth #13 to #11 was made with releasing incisions, followed by flap elevation and ostectomy using a high-speed bur, after which the lesion was removed. An transoperative panoramic radiograph confirmed complete lesion removal. The cavity was cleaned, suturing was performed with simple stitches, and the patient was discharged with prescriptions for analgesics and anti-inflammatory drugs. The patient remains under follow-up. **Conclusion:** This case highlights the importance of imaging examinations in the pre-, trans-, and postoperative periods, which support accurate diagnoses and guide the most appropriate clinical management for each situation.

Keywords: Retained teeth; Diagnostic imaging; Odontogenic lesions; Oral surgery.

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MULTIPLE FACIAL FRACTURES IN A PATIENT RESULTING FROM A WORK ACCIDENT – MANAGEMENT, THERAPEUTIC APPROACH, AND RECOVERY: CASE REPORT

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Introduction: Le Fort I and II fractures represent complex facial trauma patterns, causing maxilla and mid-face detachment. Le Fort I involves a horizontal maxillary fracture, while Le Fort II shows a pyramidal pattern. Both affect pterygoid processes, rarely occur in isolation, and often link with severe injuries impacting vital structures. **Objective:** This paper aims to describe the treatment protocol and functional and aesthetic rehabilitation for a patient with multiple facial fractures (Le Fort II) from a workplace accident. **Case report:** Patient FC, a 42-year-old male, presented at Hospital Geral de Fortaleza (HGF) due to difficulty eating from multiple facial bone breaks sustained in a work-related incident. His medical history included controlled pre-diabetes (metformin), no allergies or dependencies. Extraoral exam showed central facial swelling, asymmetry, and nasal bridge deformity. Intraoral exam revealed anterior open bite, coronal fracture (tooth 21), tumescence, gingival lacerations, and luxated teeth. Tomography unveiled fractures in the pterygoid process, nasal cavity, maxillary sinuses, and orbital floor, plus edema. A 3D reconstruction clearly displayed the pyramidal fracture and deformities. **Discussion:** Managing Le Fort I and II fractures, often tied to multiple traumas, demands anatomical reduction and rigid internal fixation. Literature advocates patient stabilization, treating concurrent injuries, and restoring occlusion and facial aesthetics. In this case, surgery took place in a hospital under general anesthesia, involving corrective osteotomies. A Le Fort I approach was chosen to prevent excessive mobilization and ensure proper occlusion, as it addressed a sequela with consolidated bone. This was followed by maxillomandibular blockade (MMB), reduction, and fracture fixation via a mucoperiosteal approach. **Conclusion:** Fixation used titanium plates and screws in the maxilla, stabilizing nasomaxillary and zygomaticomaxillary pillars bilaterally with "L"-shaped plates. Post-fixation, stability and occlusion were verified before repositioning incised intraoral tissues. Postoperatively, stringent oral hygiene and MMB maintenance were advised for weeks for bone consolidation, along with dietary restrictions. Regular follow-up ensured satisfactory functional and aesthetic recovery.

Keyword: Osteotomy Le Fort; Multiple Injuries; Surgery; Fracture Fixation Internal

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POLYNUCLEOTIDES IN REGENERATIVE AESTHETIC DENTISTRY: THE ROLE OF PDRN IN TISSUE REJUVENATION

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Introduction: Polynucleotides (PNs), especially polydeoxyribonucleotides (PDRNs), are low molecular weight DNA molecules that stimulate cell migration and growth, extracellular matrix protein production, and reduce inflammation. Primarily derived from salmon DNA, their use in aesthetic and regenerative dentistry is due to their ability to stimulate tissue regeneration, collagen production, and angiogenesis in the face. **Objective:** Thus, the aim of this work is to review the literature on the regenerative action of PDRNs in facial rejuvenation in aesthetic dentistry. **Methodology:** For this purpose, a search was conducted in the PubMed database using the following search strategy: (((((Wound Healing) OR (Regeneration)) OR (Regenerative Medicine)) AND (Polynucleotides))) AND (Skin). Articles published between 2015 and 2025 that addressed the application of PNs in facial rejuvenation and their biostimulatory role in dentistry were included. A total of 85 articles were found. The study selection was carried out in two stages: initially, by reading the titles and abstracts; subsequently, by reading the full text, considering eligibility criteria. Clinical studies (randomized, case-control, case reports), systematic reviews, in vivo and in vitro studies were included. Conference reports, editorials, duplicate publications, and articles that did not cover the topic were excluded. In total, 8 articles were selected. **Results:** The literature reports the effectiveness of PNs in facial and post-traumatic rejuvenation, with a reparative effect after surgeries and burns, in addition to improving skin texture and promoting skin hydration. This latter condition is favored by positive physiological conditions for the dermal matrix and for fibroblast stimulation, which ensure a more preserved and strengthened dermis. **Conclusion:** Thus, the safety of the biochemical, in addition to high biocompatibility that prevents serious adverse effects, are positive guarantees; however, standardization of clinical studies and strict vigilance regarding quality control are needed.

Keywords: Regeneration; Regenerative Medicine; Polynucleotides; Skin; Wound Healing

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PHOTOBIMODULATION IN THE TREATMENT OF DENTIN HYPERSENSITIVITY: A LITERATURE REVIEW

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Introduction: Due to various changes in population habits, an increase in the prevalence of dentin hypersensitivity (DH) has been observed. This condition is characterized by acute pain resulting from dentin exposure to thermal, evaporative, tactile, or osmotic stimuli. **Objective:** Therefore, the present study aimed to perform a literature review to evaluate the use of low-level laser therapy, also known as photobiomodulation (PBM), as a therapeutic approach for managing DH. **Methodology:** A bibliographic search was conducted in the PubMed database using the descriptors “Dentin Sensitivity” and “Low-Level Light Therapy” combined with the Boolean operator AND. The search strategy yielded 47 articles. Inclusion criteria encompassed English-language publications from the last five years; studies that were unavailable or lacked full-text access were excluded, resulting in 12 articles selected for analysis. The reviewed studies investigated the efficacy of PBM in reducing dentin hypersensitivity associated with different etiologies, such as dental bleaching, noncarious cervical lesions, and restorative procedures. **Results:** The results demonstrated that PBM, applied at various wavelengths (660 nm, 808 nm, 810 nm, and 970 nm), produced a significant reduction in both pain intensity and frequency, especially during the first days or weeks after treatment. In some cases, maintained reductions in sensitivity levels were observed over the long term, along with improvements in patients’ quality of life. Evidence also suggests that PBM may stimulate dentin neoformation and does not compromise the esthetic outcomes of bleaching procedures. Additionally, several studies explored the combination of PBM with desensitizing agents—such as strontium chloride, potassium oxalate, and glutaraldehyde—showing that this combination enhances analgesic effects and provides greater patient comfort. **Conclusion:** It is concluded that photobiomodulation constitutes an effective, safe, and minimally invasive therapeutic alternative for controlling dentin hypersensitivity, offering conservative pain relief.

Keywords: Dentin Sensitivity; Laser Therapy; Low-Level Light Therapy.

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ORAL REHABILITATION WITH THE ALL-ON-FOUR TECHNIQUE: A CLINICAL CASE REPORT

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Introduction: The “All-on-four” technique consists of installing four implants per arch, with the best possible anteroposterior distribution in the remaining maxillomandibular ridge. Two anterior implants are installed vertically and two posterior implants are angled distally, allowing immediate loading of the fixed prosthesis. This technique was developed as a more conservative rehabilitation alternative, avoiding procedures such as bone grafts, thus reducing morbidity and, consequently, treatment time. **Objective:** This study reports the clinical management of oral rehabilitation in a partially edentulous patient, emphasizing the benefits of the All-on-four technique as a rehabilitative alternative. **Case report:** A 60-year-old female patient sought dental care due to dissatisfaction with tooth loss. After clinical and radiographic examinations, she was diagnosed with atrophic jaws, evidenced by maxillary sinus pneumatization through computed tomography, preventing the installation of conventional implants. Rehabilitation with the All-on-four technique was indicated, as there was no need for bone grafting. Preoperative molding and pre-prosthetic planning were performed, followed by surgical placement of implants using the All-on-four technique with immediate loading, allowing the installation of the definitive bimaxillary prosthesis in less than twenty-four hours, restoring the vertical and anteroposterior height of the dental occlusion. **Conclusion:** Simultaneous rehabilitation of the maxilla and mandible with immediate prosthesis installation is a quick and efficient alternative for totally or partially edentulous patients. The All-on-four technique has made immediate loading more accessible for cases of maxillary atrophy in partially or totally edentulous patients, reducing costs, risks, morbidity, and treatment time, limiting the indication of bone grafts for cases of severe maxillary atrophy.

Keywords: Dental implants; Edentulous arch; Immediate dental implant loading.

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PRE- AND POSTNATAL EXPOSURE TO MICROPLASTIC: IMPLICATIONS FOR CHILDREN'S ORAL DEVELOPMENT

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Introduction: Human exposure to microplastics has become a growing concern. Plastic microparticles have recently been identified in placental and breast milk samples, as well as in neonatal feces, indicating a continuous cycle of exposure that began in the intrauterine environment. In addition to potential systemic effects, this early exposure can impact the development of orofacial tissues, including tooth germs, jaw bones, and the oral immune system. **Objective:** To analyze the presence of microplastics in the bodies of pregnant women, infants, and fetuses, correlating their adverse effects with child development and oral health. **Methodology:** An exploratory bibliographic search was carried out with a qualitative approach in the PubMed database. The descriptors used were: (Microplastics) AND (Breastfeeding). With the search filtered by full texts and articles published in the last 5 years, 7 articles were found. Finally, as an exclusion criterion, those who deviated from the objective to be discussed in this research were eliminated. 6 articles were selected for study, which were read and analyzed to collect evidence. **Results:** The presence of microplastics was observed in placentas, meconium, newborn feces, infant formulas and breast milk. This early exposure can trigger low-grade chronic inflammation, microbiota imbalance and endocrine dysregulation, factors that directly affect odontogenesis and craniofacial development. Possible impacts include: Impaired dental mineralization; Compromised bone development; Disturbances in tooth eruption; Changes in the oral microbiota; Increased immunological sensitivities. Chemical compounds such as BPA and phthalates present in microplastics act as endocrine disruptors and can affect the formation of tooth enamel. Animal studies show that perinatal exposure to microplastics alters tooth eruption and morphology. In addition, the use of plastic baby bottles and utensils increases oral exposure, reinforcing the need for preventive dental guidance. **Conclusion:** Early exposure to microplastics represents an emerging risk to adequate oral development. It is essential to understand these impacts to act preventively, monitor structural changes in teeth and bones, guide safe feeding practices and contribute to interdisciplinary environmental health actions.

Keywords: Microplastics; Child development; Endocrine disruptors; Oral health.

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CONSERVATIVE CLINICAL DENTAL MANAGEMENT IN A PATIENT WITH SEVERE HEMOPHILIA A: CASE REPORT

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Introduction: Hemophilia is an inherited bleeding disorder characterized by the qualitative and quantitative deficiency of coagulation factors VIII (Hemophilia A) or IX (Hemophilia B). It is an X-linked recessive condition that predominantly affects males. Recurrent episodes of joint and mucosal bleeding are common and may occur spontaneously or after minor trauma, including routine dental procedures. **Objective:** This study aims to report the clinical case of a patient diagnosed with severe Hemophilia A who underwent a minimally invasive dental approach. **Case report:** A 21-year-old male patient with leukoderma and a diagnosis of severe Hemophilia A was referred to the specialized dental service in secondary care with a complaint of pain related to tooth 46 associated with spontaneous bleeding. During the intraoral clinical examination, the tooth was found to have extensive coronal destruction and was partially covered by gingiva, with areas of active bleeding upon slight touch. This contributed to the poor hygiene in the right hemiarch of the maxilla and mandible. According to the medical records, the patient had a history of bleeding complications due to the extraction of tooth 36. Given the patient's history, conservative treatment was chosen. Before the procedure, the patient was referred to Hemoce in Sobral for injectable coagulation factor VIII and returned to the CEO. Clinical crown lengthening (CCA) was performed without bone wear, followed by endodontic treatment and finally, a composite resin restoration. The patient is currently undergoing semiannual follow-up. **Conclusion:** Hemophilia is a condition that requires a cautious and individualized approach. The clinical case highlights the feasibility of safe dental interventions in hemophiliac patients, provided they are preceded by adequate planning and interdisciplinary monitoring.

Keywords: Hemophilia A; Bleeding; Oral Surgery; Factor VIII; Dentistry.

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SURGICAL APPROACH TO BILATERAL MANDIBLE FRACTURE: CASE REPORT

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Introduction: The mandible is the only movable bone of the face and plays a fundamental role in vital functions such as chewing, speaking, swallowing and maintenance of the dental framework. Due to its anatomical location and projection in the lower third of the face, it is highly susceptible to fractures, especially in young men involved in traffic accidents. The most affected regions are the symphysis and the mandibular body. **Objective:** This study aims to report a clinical case of the approach of a bilateral mandibular fracture. **Case report:** A 33-year-old male patient attended the Oral and Maxillofacial Surgery and Traumatology outpatient clinic of the Hospital Geral de Fortaleza (HGF Fortaleza, Ceará, Brazil) with bilateral mandibular fracture. In the anamnesis, the patient reported that the fracture was due to a motorcycle accident. The patient presented symptoms of dental disocclusion. After intra and extraoral clinical examination and analysis of the 3D reconstruction of the tomography, it was possible to observe the bilateral fracture in the region of the mandible body, thus scheduling the functionally stable reduction of the fracture with fixation of plates and screws of the 2.0 mm system under general anesthesia and intraoral access. **Discussion:** The mandible fracture is one of the most prevalent among the bones of the face, due to its size, topography, anatomy and projection in the lower third of the face, being commonly one of the most fractured bones since it is involved in chewing, phonation and swallowing, injuries to its apparatus can lead to anatomical and functional damage, impairing the patient's quality of life. In the event of a traumatic injury to the bone tissue, surgical intervention is necessary, the treatment is internal fixation, in which anatomical reduction is performed associated with fixation of the bone segments through plates and screws offering pain relief, functional recovery and better mouth opening in a short period. **Conclusion:** In the present clinical case, fracture reduction was performed with two 2.0 mm system plates. Double fractures require that at least one of the fractures be subjected to rigid fixation to reduce the incidence of complications.

Keywords: Bone fixation; Trauma; Fracture.

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CORRECTION OF VELOPHARYNGEAL INSUFFICIENCY BY MEANS OF SECONDARY PALATOPLASTY AND UNILATERAL MYOMUCOSAL FLAP: CASE REPORT.

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Introduction: Cleft lip and palate are the most common facial deformities in the world population. This congenital defect can cause several changes in the patient's life, including velopharyngeal insufficiency, which is represented by a failure to perform velopharyngeal closure due to alterations of structural origin, compromising speech production in different ways. **Objective:** To report the case of a correction of velopharyngeal insufficiency through a secondary palatoplasty with the aid of a myomucosal flap. **Methodology:** A 12-year-old patient, female patient presented to the clinic complaining of persistent hypernasality after primary palatoplasty. Intramuscular examination revealed anatomical insufficiency in the soft palate, and clinical findings led to a diagnosis of velopharyngeal insufficiency. **Case report:** Based on the diagnosis, the patient was recommended to undergo further surgery to establish adequate phonetics and improve her quality of life. Secondary palatoplasty was performed in a hospital setting under general anesthesia and orotracheal intubation was fixed in the midline. Initially, a 1.5-cm-wide zone was marked unilaterally, ending at the same width as the center of the flap and just below the parotid duct osteotomy, with Y-shaped ends. The flap was elevated from the angle of the mouth. The flap was incised only at the extremity and then dissected with scissors, dissecting the muscles and Bichat ball attached to the mucosa. After obtaining the flap, a transverse incision was made between the hard and soft palates, releasing the mucosa and musculature between them. The loose musculature was pulled back toward the posterior pharynx and sutured in the midline. The myomucosal flap was then repositioned to the new dimension obtained. A "gap" was then created using absorbable suture and layered sutures, initially covering the oral mucosa and buccinator muscle, followed by the Bichat ball covering the region. **Conclusion:** Healing occurred by primary intention through collapse of the edges, and the adipose tissue underwent metaplasia, transforming into oral mucosa. Therefore, the patient was referred to speech therapy and returned after 1 month with improved speech.

Keywords: Velopharyngeal insufficiency; Palatoplasty; Surgery.

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THE ROLE OF THE DENTAL SURGEON IN IDENTIFYING THE INITIAL CLINICAL MANIFESTATIONS OF POLYCYTHEMIAVERA AND ITS DENTAL MANAGEMENT: A CASE REPORT

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Introduction: Polycythemia Vera (PV) is classified as a myeloproliferative neoplasm, which is related to a mutation in the JAK2 gene, in which there is an increase in the production of blood cells. Symptoms include weakness, tiredness, dizziness and shortness of breath. In addition, the following changes are observed in the oral cavity: petechiae on the mucosa, gingival hyperplasia, excessive bleeding at the slightest trauma, tooth loss and itchy oral ulcers. In this way, the oral manifestations combined with the clinical signs and symptoms observed during the dental examination can help in the investigation of the diagnosis. In addition, the dental surgeon (DS) must be prepared to employ the appropriate dental approach. **Objective:** Based on this, the aim of this study is to report on the importance of the clinical dental examination as an auxiliary tool in the diagnosis of PV, as well as the conduct used in the adequacy of the oral cavity. **Case report:** A 61-year-old female patient with leukoderma was referred to the secondary care specialized dentistry service. Her main complaint was discomfort due to tooth mobility and bleeding during eating and oral hygiene. During the interview, the patient reported a history of bleeding after tooth extraction. In addition, the extraoral clinical examination revealed areas of ecchymosis on the lower limbs. The intraoral clinical examination revealed areas of gingival hyperplasia with bleeding points, tooth mobility, the presence of tartar and significant halitosis. Based on the information gathered during the dental examination, a hematologist's opinion was requested for investigation of possible blood dyscrasia and subsequent dental intervention. After diagnosing PV, starting therapy and stabilizing the condition, dental treatment was planned and carried out. Exodontia and excision of the areas of gingival hyperplasia were carried out. The patient showed significant improvement after the first dental intervention. She is currently undergoing interdisciplinary follow-up, with planning underway for future oral rehabilitation. **Conclusion:** The case reinforces the role of the CD in the early identification of oral manifestations of PV, contributing to diagnosis and interdisciplinary management. This highlights the importance of expanding knowledge about the interface between oral health and hematological conditions.

Keywords: Polycythemia Vera; Neoplasms; Oral Manifestations.

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CERVICAL LESIONS IN FOCUS: WHAT CLINICIANS NEED TO KNOW TO DIAGNOSE AND TREAT WITH SAFETY AND PREDICTABILITY.

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Introduction: Non-carious cervical lesions (NCCLs) correspond to the loss of dental structure in the cervical region, without the involvement of caries. Their etiology is multifactorial, with emphasis on tensile, frictional, and biocorrosion factors, whose interaction may favor the onset and progression of the condition. Accurate diagnosis represents a clinical challenge, given the overlap of causes and the wide variety of clinical manifestations. **Objective:** This study aims to review the literature and discuss the complexity involved in the diagnosis and, consequently, in the establishment of the therapeutic planning of NCCLs. **Methodology:** The literature review was carried out in the MEDLINE (PubMed) database, using the descriptors “Non-Carious Cervical Lesions,” “Restorative Dentistry,” and “Dentin Hypersensitivity,” combined using the Boolean operator AND. A total of 54 articles were initially identified, of which 5 studies were selected after applying inclusion criteria (publications from the last five years and available in English) and exclusion criteria (incomplete works or outside the scope). **Results:** The analysis of the studies revealed that effective diagnosis of NCCLs requires a thorough clinical evaluation, including parafunctional habits, dietary and oral hygiene practices, and the patient's systemic history. After an accurate diagnosis, the treatment plan should consider the depth of the lesion, presence of dentin hypersensitivity, and associated periodontal changes. In cases of lower complexity, the use of composite resins combined with universal adhesives has shown excellent clinical outcomes and restorative longevity. Lesions with greater structural loss may benefit from fiber-reinforced resins, thus improving the performance of these restorations. In high-complexity cases, the combination of periodontal and restorative treatment has proven effective in root coverage, as well as in reducing hypersensitivity and improving aesthetics. **Conclusion:** It is concluded that the treatment of NCCLs requires individualized and careful evaluation, considering the multiple etiological and clinical factors involved. The establishment of an appropriate therapeutic plan is essential to ensure functionality, comfort, and satisfactory aesthetic outcomes.

Keywords: Non-Carious Cervical Lesions; Restorative Dentistry; Dentin Hypersensitivity.

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ENDODONTIC MANAGEMENT OF A MAXILLARY MOLAR WITH C-SHAPED CANAL AND INCOMPLETE ROOT DEVELOPMENT: CASE REPORT WITH APEXIFICATION AND ULTRASONIC DISINFECTION

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Introduction: Morphological variations of root canals represent significant challenges in endodontic practice, especially when associated with immature teeth. The C-shaped canal configuration, although more frequently found in mandibular molars, can occasionally occur in maxillary molars and is characterized by partial or complete fusion of the canals. This complex anatomical conformation hinders both mechanical instrumentation and chemical disinfection, requiring specific strategies to achieve therapeutic success. In cases of open apices, as in young patients, apexification procedures are necessary to ensure proper apical sealing. **Objective:** This paper aims to report the endodontic management of a maxillary molar with a C-shaped root canal configuration and incomplete root formation, emphasizing the use of ultrasonic activation as an adjunctive method for effective disinfection. **Case Report:** A 9-year-old female patient presented with spontaneous pain and swelling in the posterior region of the left maxilla. Clinical examination revealed extensive coronal destruction with pulp exposure, and periapical radiography showed an open apex and periapical bone rarefaction. Endodontic treatment with apexification induction was chosen. Upon access, the disto-palatal canal displayed a C-shaped configuration. Disinfection was performed using 2.5% sodium hypochlorite with passive ultrasonic activation to enhance cleaning of the complex anatomical spaces. Calcium hydroxide associated with propylene glycol was used as intracanal medication. After 15 days, an apical plug was placed using mineral trioxide aggregate (MTA), followed by obturation with thermoplasticized gutta-percha and AH Plus sealer, achieving a hermetic and biocompatible seal. **Conclusion:** This case highlights that the combination of advanced irrigation techniques and intracanal medication can enhance disinfection efficacy and create favorable conditions for apexification in teeth with atypical anatomy and immature apices. Early recognition of morphological variations and the adoption of appropriate protocols are essential to preserving tooth structure and ensuring functional longevity in young patients.

Keywords: Apexification; C-shaped canal; Endodontics.

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COLLECTIVE ACTIONS IN ORAL HEALTH WITH SUPERVISED TOOTHBRUSHING FOR SCHOOLCHILDREN IN THE MUNICIPALITY OF SOBRAL – CE: EXPERIENCE REPORT

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Introduction: The early years of life are when children have the ability to easily learn and apply in their daily lives what is taught to them, making this the ideal stage to provide essential guidance for a healthy life, such as techniques for disease prevention and oral health maintenance. Therefore, it is essential to encourage the participation of university extension programs in educational centers, promoting educational and preventive initiatives. **Objective:** To report the experience of an oral health education intervention conducted by first-semester students of the Dentistry Program at Faculdade Luciano Feijão (FLF) with eight-year-old children from CAIC School, in the municipality of Sobral – Ceará, during the Public Health I course, carried out in May 2025. **Methodology:** The students developed an oral health awareness activity based on Paulo Freire's Problematic Pedagogy and guided by Charles Maguerez's Arch Methodology, which consists of problematizing reality, finding solutions, and ultimately applying the proposed strategy to individuals' daily lives. Brushing techniques were taught using macromodels mouth, dental floss, and toothbrushes, presented in a playful and simplified language to ensure better understanding by the target audience. Afterwards, a supervised brushing session was held, allowing the children to demonstrate what they had learned, while the students provided guidance and made necessary corrections. **Results:** The activity revealed that many children were not brushing their teeth properly, either due to lack of knowledge or motivation. However, the intervention proved to be productive, as the students actively participated, showed interest in the activity, asked questions, and engaged in all moments and dynamics proposed and led by the Dentistry students. **Conclusion:** The visit to CAIC School was a valuable experience that contributed to the training of future oral health professionals and strengthened the connection between dentistry and the community. Furthermore, the target audience benefited directly by participating in an educational activity with playful elements, which contributed to their learning and expanded their knowledge on the prevention of oral diseases and the maintenance of their oral health.

Keywords: Toothbrushing; Health Education, Dental; Child Rearing.

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HEALTHY HABITS IN CHILDHOOD: NUTRITION AND ORAL HYGIENE AS HEALTH EDUCATION PRACTICES

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Introduction: Childhood is a key period for developing lifelong healthy habits. Encouraging proper nutrition and oral hygiene from an early age supports children's growth, prevents disease, and promotes overall well-being. Schools play an important role in this process, offering a setting for continuous learning and direct engagement. Additionally, the school environment allows health-related topics to be explored in interdisciplinary way, contributing to the child's holistic development.

Objective: To raise students' awareness about the importance of a balanced diet, encourage regular tooth brushing, and apply topical fluoride as a preventive measure against dental caries.

Methodology: This descriptive report is based on an educational activity carried out in May 2025 at CAIC School – Raimundo Pimentel Gomes, involving 18 children aged 8 to 9. The activity was playful, participatory, and grounded in problematizing pedagogy, following the stages of Charles Maguerez's Arch. The process began with the observation of the students' reality regarding their eating and oral hygiene habits (Stage 1: observation of reality). Then, the main issues were identified, such as inadequate brushing and the consumption of unhealthy foods (Stage 2: key points). A collective reflection followed to explore the causes of these problems (Stage 3: theorization), which led to the implementation of educational strategies (Stage 4: hypothesis of solution), including the use of a "healthy eating box" with symbolic food items, demonstration of proper brushing technique using a large mouth model, toothbrush, and toothpaste, as well as supervised brushing and the topical application of fluoride. To reinforce learning, painting kits were given to the children and informational pamphlets were sent to parents, strengthening the partnership between school and family (Stage 5: application to reality). **Results:** The children were highly engaged and participated actively in all parts of the activity. They successfully distinguished between healthy and unhealthy foods and showed curiosity during the demonstrations. Many were unfamiliar with proper brushing techniques but corrected their habits with hands-on guidance. The fluoride application was well received. Several students expressed a desire to share the experience with their families, suggesting a positive ripple effect. Teachers and staff valued the initiative and recommended that similar actions be repeated regularly. **Conclusion:** The activity had a strong positive impact, highlighting the value of health education in schools. Interactive and age-appropriate methods effectively promoted learning and encouraged the development of healthy habits. Strengthening the connection between school and family was key to this success. Expanding such initiatives can support long-term health promotion and disease prevention among children.

Keywords: Healthy Eating; Oral Hygiene; Health Education; Children; School.

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ORAL DYSBIOSIS IN THE DEVELOPMENT OF ORAL POTENTIALLY MALIGNANT DISORDERS: A LITERATURE REVIEW

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Introduction: Oral dysbiosis (OD), characterized by an imbalance in the oral microbiota, has been associated with oral potentially malignant disorders (OPMDs), including leukoplakia, erythroplakia, and oral lichen planus (OLP), as well as their progression to oral squamous cell carcinoma (OSCC). Emerging evidence highlights the role of oral microorganisms in carcinogenesis through alterations in the tissue microenvironment, chronic inflammation, and disruption of host cellular pathways.

Objective: To analyze the scientific evidence on the contribution of OD to the initiation and progression of OPMDs and its potential role in oral carcinogenesis. **Methodology:** A structured literature search was conducted in the PubMed database using the descriptors “Oral Microbiome,” “Dysbiosis,” and “Oral Potentially Malignant Disorders,” combined with the Boolean operator AND. Filters included articles published within the previous five years, written in English, and available in full text. The search retrieved 59 articles, which were screened by title and abstract. Studies addressing OD as a primary factor in OPMD development were included, whereas those focusing on cancers at other anatomical sites were excluded. Ten articles met the eligibility criteria and were selected for full-text review. **Results:** Patients with OPMDs and OSCC exhibited reduced oral microbial diversity compared with healthy individuals. Pathogenic species, including *Fusobacterium nucleatum*, *Porphyromonas gingivalis*, and *Treponema denticola*, were reported more frequently and were associated with chronic inflammation and modulation of cellular pathways involved in proliferation and apoptosis. OD may also compromise epithelial barrier integrity, facilitating carcinogen penetration and direct interactions between bacteria and host cells. Furthermore, alterations in local immune responses may impair the elimination of potentially malignant cells. These mechanisms may contribute to a self-perpetuating cycle of inflammation, oxidative stress, and molecular damage, potentially accelerating oral carcinogenesis in conjunction with environmental factors. **Conclusion:** Oral dysbiosis may contribute to the initiation and progression of OPMDs through inflammatory, immunological, and molecular mechanisms associated with oral carcinogenesis. Its identification and management may represent promising complementary strategies for prevention and clinical care. Further studies are needed to clarify the underlying mechanisms and validate microbial biomarkers for clinical application.

Keywords: Dysbiosis; Precancerous Conditions; Oral Microbiome.

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NASOPALATINE DUCT CYST WITH UNUSUAL PRESENTATION: CASE REPORT

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Introduction: The nasopalatine duct cyst is the most common non-odontogenic cyst in the oral cavity, affecting around 1% of the population. It derives from embryonic remnants of the nasopalatine duct and is most common between the fourth and sixth decades of life, especially in men. Radiographically, it appears as a well-defined radiolucent lesion in the midline of the anterior maxilla, between the central incisors, without root resorption. It can be oval, round, inverted pear-shaped or heart-shaped, with sclerotic borders. **Objective:** To report a clinical case of a nasopalatine duct cyst with an unusual presentation. **Case report:** A female patient was referred for endodontic treatment of teeth 11, 12 and 21 due to the presence of fistulas in these regions. Initial radiographic examination revealed a large radiolucent image associated with the apical regions of teeth 11 and 12, as well as a similar area at the apex of tooth 21. Endodontic treatment was carried out on teeth 12 and 21. During access and chemical-mechanical preparation of tooth 11, persistent exudate was observed. Multiple changes of intracanal medication with calcium hydroxide were carried out every 20 days, but the exudation did not stop. Given the lack of resolution, a cone beam computed tomography (CBCT) scan was requested, which revealed an extensive hypodense image involving the apices of teeth 11 and 12, with obvious communication with the incisive foramen. The decision was made to surgically remove the lesion, with apicectomy, transoperative filling with AH Plus sealer, retropreparation and retrofilling using MTA. The removed material was sent for histopathological analysis, which confirmed that it was a nasopalatine duct cyst. **Conclusion:** The diagnosis is not based solely on clinical and radiographic examination. A multidisciplinary approach is necessary to treat some cases.

Keywords: Endodontics, Dental radiography, Cysts.

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RARE ORAL AND MAXILLOFACIAL MANIFESTATION OF HERPES ZOSTER AFTER VACCINATION AGAINST COVID-19 IN A PERSON LIVING WITH HIV – CASE REPORT.

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Introduction: Herpes zoster (HZ), or shingles, has been reported in individuals vaccinated against COVID-19, generating debate about a possible correlation, although there is still no consensus in the literature. The varicella-zoster virus, which causes chickenpox, remains latent in nerve ganglia and, when reactivated, causes HZ, characterized by painful vesicular rashes. In people living with HIV (PLHIV), the risk of developing HZ is increased, even with antiretroviral therapy. Given the scarcity of studies on the relationship between HZ and COVID-19 vaccination in PLHIV. **Objective:** This study reports a rare case of oral and maxillofacial manifestations of HZ post-vaccination in this specific group. **Case report:** A 62-year-old male patient under medical follow-up for HIV infection presented to our service eight days after the last dose of COVID-19 vaccine. Extraoral examination revealed disseminated vesicles strictly limited to the left side of the face, skin, and vermilion of the upper lip. Oroscopy revealed erythematous vesicles on the edentulous alveolar ridge and hard and soft palate. The lesions were located on the left side of the oral cavity, respecting the midline. Clinical characteristics allowed the diagnosis of herpes zoster. Oral acyclovir 800 mg 5 times daily for two weeks was prescribed. Routine complementary tests performed during the medication showed an undetectable HIV viral load and a CD4 lymphocyte count of 478 cells/ml. **Conclusion:** One month after stopping acyclovir, only black spots on the left side of the face persisted, while the oral mucosa appeared completely healed.

Keywords: Herpes Zoster, HIV, Covid-19.

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OSTEORADIONECROSIS AND ENDODONTIC TREATMENT: RISKS, PREVENTION AND CLINICAL MANAGEMENT

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Introduction: Osteoradionecrosis (ORN) of the mandible is a severe late complication of radiotherapy in patients with head and neck cancer. Radiation-induced vascular damage and tissue alterations may compromise bone healing and increase susceptibility to necrosis, particularly following dental procedures or in the presence of oral infections. Endodontic treatment may represent a conservative alternative to tooth extraction in previously irradiated patients, potentially reducing the risk of ORN. **Objective:** To report the effects of endodontic treatment in irradiated patients and examine its association with the risk of developing ORN. **Methodology:** A narrative literature review was conducted in March 2025 using the PubMed database. The search included publications from the previous five years and employed the descriptors “osteoradionecrosis” AND “root canal treatment.” Inclusion criteria comprised full-text articles available free of charge, case reports, and systematic reviews published in English or Portuguese. Non-academic publications, studies outside the scope of the topic, and articles with inadequate methodologies were excluded. Six articles were initially identified, of which four were selected for analysis after full-text assessment. **Results:** The selected studies evaluated periapical changes in teeth undergoing endodontic treatment following intensity-modulated radiotherapy (IMRT). An increase in periapical alterations was observed after radiotherapy, particularly at doses below 40 Gy. However, no evidence of ORN was reported in the analyzed studies. Irradiated patients may also present with calcified root canals, posing challenges to endodontic treatment. In this context, dynamic navigation technology (X-Guide) has been used to facilitate access to calcified canals and improve procedural precision. **Conclusion:** Although IMRT may be associated with an increased occurrence of periapical alterations, the available evidence does not establish a direct relationship between endodontically treated teeth and the development of ORN. Endodontic treatment may be a conservative alternative to tooth extraction in previously irradiated patients, while dynamic navigation may assist in managing calcified root canals. Further clinical studies are needed to clarify these associations and strengthen evidence-based recommendations for dental care after radiotherapy.

Keywords: Root canal treatment; Osteoradionecrosis; Endodontics

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SURGICAL TREATMENT OF MULTIPLE FACIAL FRACTURES INVOLVING LE FORT II: A CASE REPORT

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Introduction: Facial fractures represent a challenge in oral and maxillofacial clinical practice, due to the anatomical complexity of the region and the functional, aesthetic and psychological repercussions they can cause. The main causes of these fractures are related to car accidents and physical aggression. Treatment aims to promote bone healing, restore ocular, masticatory and nasal functions, recover speech and achieve a satisfactory facial and dental aesthetic result. Mandibular fractures are classified according to impact and location, and the prognosis is influenced by the angulation of the fracture and muscle insertion. Fractures of the middle third of the face are categorized as Le Fort I, II and III fractures, zygomatic complex fractures, zygomatic arch fractures and naso-orbito-ethmoidal (NOE) fractures. The Le Fort II fracture is characterized by the separation of the maxilla from the nasal complex. **Objective:** To report a clinical case of surgical treatment of multiple facial fractures, with a focus on functional and aesthetic rehabilitation. **Case report:** A 23-year-old male patient denied comorbidities, chronic use of medication, allergies or addictions. A victim of facial trauma due to a motorcycle accident, he developed multiple facial fractures. Extraoral examination revealed facial asymmetry, limited mouth opening and edema. Intraoral examination revealed the absence of dental elements 31, 32, 41 and 42. A cone beam computed tomography scan was requested, which revealed a fracture of the frontal bone, bilateral fractures of the zygomatic bones (classified as Le Fort II), a blowout fracture of the floor of the orbit and a fracture in the anterior region of the mandible. The patient was referred to the operating room where, under general anaesthesia, bicoronal and vestibular mandibular accesses were performed, followed by curettage, osteotomy, mobilization, reduction and rigid internal fixation of the fractures. The immediate postoperative period was uneventful, with fracture stability and good functional recovery. **Conclusion:** The treatment of multiple facial fractures requires accurate imaging and appropriate surgical planning. An early and multidisciplinary approach contributes to functional and aesthetic rehabilitation, as demonstrated in this case.

Keywords: Le Fort osteotomy, surgery, Multiple fractures

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SEALING OF SEVERE FURCATION PERFORATION IN A MANDIBULAR MOLAR USING MTA: A CLINICAL CASE REPORT

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Introduction: Root perforations represent a significant complication in endodontics, defined as an unintended communication between the root canal system and the surrounding periodontal tissues. This condition has a direct impact on treatment prognosis and the long-term retention of the tooth. Successful outcomes depend heavily on early diagnosis, accurate localization of the perforation, and the use of biocompatible materials with effective sealing properties. Mineral Trioxide Aggregate (MTA) has emerged as the material of choice for sealing root perforations due to its excellent biocompatibility, sealing ability, and potential to promote tissue regeneration. **Objective:** To present a clinical case involving endodontic treatment of a mandibular molar with root perforation repair using MTA. **Case Report:** A female patient was referred for endodontic treatment of tooth #46, presenting with a sinus tract and slight tooth mobility. The treatment had previously been initiated by another clinician, who recommended extraction. The initial radiograph revealed significant dentin loss at the level of the pulpal floor, bone loss in the furcation area, and the presence of a periapical lesion. Following rubber dam isolation, endodontic access was completed, and the perforation site was identified. The area was carefully debrided, and the perforation was sealed using MTA and flowable resin. Subsequently, chemomechanical preparation of the canals was performed, utilizing passive ultrasonic irrigation and rotary instrumentation. Intracanal medication with calcium hydroxide was placed, followed by obturation with AH Plus sealer and the Tagger hybrid technique using gutta-percha. The patient remains asymptomatic, with the tooth fully functional in mastication. **Conclusion:** The favorable clinical outcome supports the effectiveness of MTA in managing root perforations, contributing to the preservation of tooth structure and the overall success of endodontic therapy.

Keywords: Perforation; Cone-beam computed tomography; MTA; Endodontics.

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ORAL REHABILITATION WITH IMMEDIATE LOADING IN A PATIENT WITH CHRONIC PAIN: DENTISTRY IN THE CONTEXT OF COMPLEX SYSTEMIC CONDITIONS

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Introduction: Fibromyalgia is a chronic syndrome characterized by widespread musculoskeletal pain, fatigue, and emotional disturbances, presenting challenges to dental treatment due to increased sensitivity to discomfort and difficulties adapting to prosthetic devices. Comprehensive care should consider both clinical requirements and the patient's psychosocial needs. **Objective:** To describe the planning and execution of immediate-loading oral rehabilitation in a patient with fibromyalgia, emphasizing emotional considerations and clinical criteria for prosthesis installation. **Case Report:** A 55-year-old female patient presented with dissatisfaction regarding a fractured and aesthetically compromised maxillary fixed prosthesis that had been inadequately planned and executed. Clinical examination and cone-beam computed tomography revealed an unfavorable prognosis for the prosthetic abutments. The treatment plan involved extracting the remaining teeth and placing four implants using the All-on-Four technique. A provisional prosthesis was fabricated and installed on the fourth postoperative day, within the clinically accepted period for immediate loading. An individualized prosthetic approach was adopted to allow real-time esthetic and functional adjustments based on the patient's feedback. Psychiatric support was also recommended as part of a multidisciplinary approach. During postoperative follow-up, the patient reported improved esthetic self-perception, greater confidence when smiling, and enhanced self-esteem. **Conclusion:** Implant-supported oral rehabilitation, when performed according to appropriate clinical criteria and tailored to individual needs, may contribute to improved oral function, esthetics, and psychosocial well-being in patients with fibromyalgia. This case highlights the importance of integrating clinical precision, individualized care, and multidisciplinary support in the management of patients with chronic pain syndromes.

Keywords: Chronic Disease; Immediate Dental Implant Loading; Musculoskeletal Pain; Mouth Rehabilitation.

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CLEFT LIP AND PALATE REHABILITATION: A PEDIATRIC CASE REPORT

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Introduction: Cleft lip and palate are characterized as craniofaciais anomalies that occur during gestation, specifically in the first trimester. Linked to as-yet-unknown genetic causes, the resulting morphofunctional alterations include fissures in the lip and palate regions, dental anomalies, feeding difficulties (such as impaired infant suckling), and speech impediments. Surgical rehabilitation planning must incorporate techniques that promote both aesthetic and functional outcomes, as well as the reconstruction of facial anatomical areas. **Objective:** This study aims to report a clinical case of a pediatric patient who received primary surgical procedures for cleft lip and palate, utilizing the Von Langenbeck and Fisher surgical techniques. **Case Report:** A 7-year-old male patient presented to the outpatient clinic with a chief complaint of cleft lip and palate. Examination revealed a right unilateral transforamen cleft. At 6 years of age, the patient underwent cheiloplasty, a surgical procedure for lip closure, using the Fisher technique. One year later, palatoplasty was performed, combining the Von Langenbeck surgical technique and veloplasty. **Conclusion:** The execution of cheiloplasty in conjunction with the Fisher technique ensures detailed reconstruction of the anatomical areas of the lip through the repositioning of facial tissues, achieving a notable standard of symmetry. Subsequently, in palatoplasty, the Von Langenbeck technique aligns with the principles of mucoperiosteal flaps, essential for closing the cleft in the hard palate region. This is combined with veloplasty, which reconstructs the soft palate musculature, thereby enabling normal speech function.

Keywords: Cleft Palate; Cleft Lip; Oral Surgery.

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ESTHETIC AND FUNCTIONAL REHABILITATION AFTER PIN INDICATION FAILURE: A RESOLUTIVE CLINICAL PROTOCOL

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Introduction: Technical failures in restorative procedures can negatively impact the durability of oral rehabilitations, compromising structural integrity and patient health. Among these failures, the definitive cementation of provisional pins stands out as a clinical oversight that may go unnoticed for extended periods until signs such as coronal fractures or loss of retention emerge. In such situations, adopting evidence-based approaches combined with minimally invasive technologies is crucial for ensuring safe and effective correction. **Objective:** This paper aims to report the clinical management adopted for the replacement of a provisional metallic pin definitively cemented, highlighting the restorative planning and material selection that enabled the esthetic and functional rehabilitation of the affected tooth. **Case Report:** A 60-year-old female patient presented for consultation, reporting a fracture of a provisional acrylic resin crown on tooth #24, with no pain or discomfort. Radiographic examination revealed the presence of a provisional metallic pin cemented with zinc phosphate cement. Endodontic evaluation indicated satisfactory treatment, with no retreatment necessary. The metallic pin was carefully removed using specific ultrasonic tips to preserve the root structure and prevent fractures. Subsequently, the canal was prepared for the placement of a fiberglass post, chosen due to its modulus of elasticity, which is similar to that of dentin. This similarity promotes homogeneous distribution of masticatory stresses and enhances biomechanical safety. The final stage of rehabilitation involved the fabrication and adhesive cementation of a definitive lithium disilicate crown, a material combining strength and esthetics, ensuring a natural final result. **Conclusion:** In conclusion, correcting clinical failures requires technical expertise, thorough case analysis, and proficiency in modern restorative techniques. The use of fiberglass posts and adhesive ceramic systems represents a safe and conservative approach that significantly contributes to the longevity of the rehabilitation and patient satisfaction. This case highlights the importance of critically reviewing previous procedures and applying updated protocols to restore masticatory function, esthetics, and patient confidence in their dental treatment.

Keywords: Oral Rehabilitation; Dental Esthetics; Dental Pins; Treatment Failure; Clinical Protocols.

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REMOVAL OF AN UPPER THIRD MOLAR LOCATED INSIDE THE MAXILLARY SINUS: CASE REPORT

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Introduction: Tooth impaction is a pathological situation in which a tooth cannot reach its normal functional position. Impacted third molars are commonly found in routine dental practice, which can be related to some noble structures such as the inferior alveolar nerve or the maxillary sinus, requiring precise planning to prevent complications. **Aim:** The aim of this study is to report a clinical case of the treatment of a surgical complication of a third molar displaced into the maxillary sinus. **Case report:** A 40-year-old female patient, M.P.M., came to the Oral and Maxillofacial Surgery and Traumatology outpatient clinic at Hospital Geral de Fortaleza (HGF, Fortaleza, Ceará, Brazil) with pain, erythema and an increase in volume in her right hemiface. In her medical history, the patient reported that an attempt had been made to extract tooth 18, but during the surgery the tooth was displaced into the right maxillary sinus, leading to maxillary sinusitis. After an intra- and extra-oral clinical examination, in which no noteworthy alterations were observed, analysis of the CT scan in axial sections, coronal and sagittal reconstructions, panoramic reconstruction of the CT scan, as well as three-dimensional reconstruction of the CT scan, it was possible to observe tooth 18 inside the right maxillary sinus, which led to its removal under local anesthesia and surgical cleaning of the region. **Results:** The patient underwent surgery and is being followed up post-operatively with no clinical signs of infection or plaque exposure, and the control panoramic radiograph showed the osteosynthesis material in position and no signs of dental remnants or any type of foreign body. **Conclusion:** It can be concluded that the removal of impacted third molars involving the noble anatomical structures of the face is carried out more safely by oral and maxillofacial surgeons, which contributes to a reduction in possible complications.

Keywords: Third Molar, Maxillary Sinus, Tooth Extraction

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ORAL MANIFESTATIONS OF CELIAC DISEASE AND THE ROLE OF THE DENTIST IN THE DIAGNOSIS AND TREATMENT OF THE DISEASE

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Introduction: The digestive system is susceptible to various conditions that can impair its function. Among these is Celiac Disease (CD), an autoimmune condition affecting the intestine that develops in genetically predisposed individuals upon gluten ingestion. This chronic immunological reaction causes inflammation in the small intestine wall, leading to villous atrophy and, consequently, the malabsorption of vital nutrients. Furthermore, extraintestinal manifestations can occur, including those affecting the oral cavity, making the role of the Dental Surgeon (DS) essential in diagnosing and treating the disease. **Objective:** This study aims to describe the oral manifestations of CD, highlighting their prevalence, clinical forms, and the importance of the DS in managing these alterations. **Methodology:** A comprehensive literature review was conducted using the PubMed and Lilacs databases. The search terms "Oral Manifestation," "extraintestinal manifestations," and "Celiac's Disease" were combined with the "OR" and "AND," initially yielding 466 articles. Inclusion criteria for the research were articles published between 2020 and 2025, including classic articles, clinical studies, clinical trials, controlled clinical trials, and systematic reviews, with full texts available in English and Portuguese. After applying exclusion criteria, which involved removing unavailable or incomplete works and texts unrelated to the topic, a total of 4 articles remained. **Results:** The studies indicated that the primary oral occurrences in celiac patients include dental enamel defects, recurrent aphthous ulcers, dry mouth, atrophic glossitis, and burning tongue sensation. The articles reported that dental enamel defects are common in CD patients, with approximately 66.9% of celiac adults presenting with hypoplasia and grooved discoloration in permanent teeth. Additionally, aphthous ulcers were the most frequently cited manifestation across the studies. Their pathogenesis may be linked to micronutrient deficiencies (such as iron, folic acid, and vitamin B12) due to intestinal malabsorption or direct immunological reactions to gluten exposure. **Conclusion:** The oral manifestations of CD are diverse and can aid in early diagnosis. Thus, the DS plays a crucial role in recognizing these lesions, contributing to the identification, referral, and dental management of symptoms in collaboration with medical professionals, through a thorough anamnesis and clinical examination.

Keywords: Celiac disease, oral manifestations, dental enamel defects, dental surgeon.

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ANATOMICAL RELEVANCE OF THE INFERIOR ALVEOLAR NERVE IN DENTAL PROCEDURES: A LITERATURE REVIEW

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Introduction: The inferior alveolar nerve (IAN) is a key anatomical structure in dental practice, particularly in mandibular procedures. It runs through the mandibular canal, from the mandibular to the mental foramen, providing sensory innervation to the lower teeth, lip, and chin. Precise knowledge of its course is essential to prevent complications such as paresthesia or prolonged anesthesia. Misidentification can lead to temporary or permanent injury, making imaging-based planning crucial.

General Objective: To understand the anatomical importance of the inferior alveolar nerve for the safe execution of dental procedures and the prevention of injuries.

Methodology: The review searched PubMed, BVS, and SciELO databases for studies on the inferior alveolar nerve and oral surgery, published in the last 5 years in English, Portuguese, or Spanish, prioritizing randomized clinical trials in humans, complete and open-access. Articles unrelated to the topic, older than 5 years, or irrelevant to dental practice were excluded. Of the initial 350 studies, 25 were included in the final analysis. **Results and discussion:** The analysis of the selected studies revealed that the inferior alveolar nerve (IAN) has a complex mandibular course. The reviewed studies reported temporary paresthesia rates ranging from 0.4% to 8.4%. Proper use of imaging exams improves predictability and reduces the risk of injuries. Therefore, the surgeon's anatomical knowledge is important to minimize impacts on patients' quality of life. **Conclusion:** Understanding the anatomy of the Inferior Alveolar Nerve (IAN) is crucial in dentistry, especially in oral surgeries. Knowing its path and variations, combined with the use of imaging exams like cone-beam (CBCT), allows dentists to plan procedures with greater precision and reduce the risk of injuries. Furthermore, continuous training is fundamental to identify these variations and ensure safer and more effective dental treatments, thereby improving patients' quality of life.

Keywords: Inferior alveolar nerve; Dental surgical complications; Nerve injuries in dentistry.

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BILATERAL MANDIBULAR AND ZYGOMATIC FRACTURES AS A RESULT OF A TRAFFIC ACCIDENT: A CASE REPORT

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Introduction: Fractures of the viscerocranium, particularly the mandible and zygomatic bone, are frequently the result of high-energy trauma, such as traffic accidents. The management of these complex injuries requires a multidisciplinary and unique approach to each procedure in order to optimize the patient's functional and aesthetic outcome. **Objective:** To report a case of bilateral mandibular and zygomatic bone fractures resulting from a motorcycle accident, detailing the diagnostic and therapeutic approach. **Case Report:** A 32-year-old male patient from Fortaleza, Ceará, was admitted to the Oral and Maxillofacial Surgery and Traumatology department of the Fortaleza General Hospital following a motorcycle accident. On extraoral examination, he had multiple facial fractures, with periorbital ecchymoses (raccoon sign) and a mouth opening limited to 24 mm. Anamnesis revealed no underlying diseases, chronic use of medication, allergies or addictions. Imaging tests, including computed tomography scans of the face (axial, sagittal and coronal sections) and 3D reconstructions, confirmed bilateral fractures of the mandible in the condyle and ramus regions, as well as damage to the zygomatic bone. The surgical procedure was performed under general anesthesia. The treatment included an extraoral approach via submandibular access (Risdon) for reduction and functionally stable fixation of the mandibular fractures with 1.5 and 2.0 mm plates and screws. For the zygomatic bone fracture, an incision was made through the upper eyelid to expose the frontozygomatic fracture, in order to minimize the risk of deformities. **Conclusion:** This case highlights the importance of a complete and detailed assessment, including a thorough anamnesis and in-depth imaging tests, for the surgical planning of complex viscerocranial trauma. A multidisciplinary approach in a hospital environment is crucial for therapeutic success, aiming for functional and aesthetic recovery and the prevention of permanent sequelae.

Keywords: Surgery, Oral; Skull Fractures; Anatomy.

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BETWEEN NEURONS AND PAIN: WHAT ARE THE NEW DISCOVERIES IN THE NEUROANATOMY OF OROFACIAL PAIN?

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INTRODUCTION

Orofacial pain is a common and complex clinical condition that poses a constant challenge in dental practice. It is estimated to affect between 15% and 22% of the adult population, affecting various structures in the head and neck region, such as teeth, masticatory muscles, salivary glands, temporomandibular joint (TMJ), and cranial nerves. This anatomical diversity complicates both diagnosis and effective treatment, highlighting the significant impact this condition has on patients' quality of life (Huber et al., 2017).

From a neuroanatomical perspective, orofacial pain transmission occurs primarily through the trigeminal nerve, which is divided into three branches: ophthalmic (V1), maxillary (V2), and mandibular (V3). Painful stimuli are captured by peripheral nerve endings and conducted to the trigeminal ganglion (TG), then to the trigeminal nuclei located in the brainstem, particularly the spinal nucleus, where initial pain processing occurs. Subsequently, nociceptive information is sent to the thalamus and, finally, to the somatosensory cortex, where conscious pain perception occurs (Unikowski et al., 2003; Ferreira et al., 2020).

The International Classification of Orofacial Pain (ICOP) classifies orofacial pain into six main categories: dentoalveolar, myofascial, joint (TMJ), neuropathic, headaches with orofacial manifestations, and idiopathic. Each category has specific causes and characteristics, with temporomandibular disorders and trigeminal neuralgia being among the most prevalent and disabling. Detailed knowledge of the neural pathways involved contributes to differential diagnosis and selection of the most appropriate therapeutic approach (OHIS, 2021).

In addition to physiological aspects, chronic orofacial pain is often associated with emotional disorders, such as anxiety, stress, and depression, which highlights the need for a multidisciplinary approach that considers biological and psychosocial factors (Lima et al., 2024).

In this context, the present study aims to analyze the neuroanatomy of orofacial pain, detailing the structures involved in the capture, transmission, and processing of painful stimuli. The aim is to highlight the importance of this knowledge for improving the diagnosis and clinical treatment of pain in dentistry.

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METHODOLOGY

This is a narrative literature review, with a qualitative and descriptive approach, carried out in July 2025. The research was conducted using the Virtual Health Library (VHL), SciELO (Scientific Electronic Library Online) and Google Scholar databases.

The following descriptors (DeCS/MeSH) were used, combined with Boolean operators:

- “orofacial pain” AND “neuroanatomy”;
- “trigeminal nerve” AND “nervous system”;
- “chronic pain” AND “neurophysiology”

After the initial search, the inclusion criteria were applied, which considered: Articles published between 2005 and 2025; studies available in full text and with free access; publications that specifically addressed the mechanisms of orofacial pain transmission and the neuroanatomy involved; and texts written in Portuguese, Spanish or English.

The following exclusion criteria were adopted: Studies focused exclusively on pharmacology or drug therapies, without an anatomical focus; duplicate studies in the databases searched; articles with insufficient content on the neural pathway of orofacial pain; and case reports or experimental studies in animal models

After applying the criteria, the titles were analyzed, and 22 articles were excluded because they were not directly related to the proposed topic. Fifteen articles remained, of which nine were selected for full reading. At the end of this stage, five studies were included in the final sample because they fully met the previously established criterias.

RESULTS AND DISCUSSION

Analysis of the articles revealed that orofacial pain is transmitted by a complex neuroanatomical network involving peripheral and central components. The trigeminal nerve, which is primarily responsible for conducting painful stimuli in the orofacial region, constitutes the primary pathway for pain perception in this area (Huber et al., 2017; Unikowski et al., 2003). The trigeminal nerve is divided into three branches: ophthalmic (V1), maxillary (V2), and mandibular (V3). These branches capture nociceptive signals and conduct them to the trigeminal ganglion, located in the middle cranial fossa. From this ganglion, nerve impulses travel to the trigeminal nerve nuclei located in the brainstem, particularly the spinal nucleus. This nucleus is subdivided into three parts: oral, interpolar, and caudal, responsible for the initial processing of pain before relaying it to the thalamus (Unikowski et al., 2003; Ferreira et al., 2020).

The thalamus integrates and redirects nociceptive information to the somatosensory cortex, allowing the brain to recognize the intensity and location of pain. Furthermore, the literature highlights the importance of the limbic system and prefrontal cortex in the emotional modulation of pain, particularly influencing cases of chronic pain (Ferreira et al., 2020; Lima et al., 2024). In specific cases of chronic orofacial pain, such as trigeminal neuralgia and temporomandibular disorders (TMDs), multidisciplinary treatment involving different healthcare professionals is often required. Furthermore, there is a strong association between chronic orofacial pain and psychological



changes, such as anxiety, psychological distress, and depression, reinforcing the importance of approaches that go beyond the traditional biomedical model (Lima et al., 2024).

Thus, an in-depth study of the neuroanatomy of pain becomes fundamental as a clinical and diagnostic tool for the dentist, contributing to the improvement of orofacial pain management and the promotion of more comprehensive and humanized care (Huber et al., 2017; Lima et al., 2024).

CONCLUSION

Orofacial pain is a common and multifaceted condition, requiring professionals to have a detailed understanding of the neural pathways that span from the peripheral region to the brain. Understanding the neuroanatomy of pain is essential for dentists to make more accurate diagnoses and develop therapeutic strategies that consider both the physical and emotional aspects of patients. By applying this anatomical knowledge to clinical practice, professionals not only enhance treatment effectiveness but also promote more humane and comprehensive care, especially in situations involving chronic and neuropathic pain. Thus, interdisciplinary collaboration between dentistry, neuroscience, and psychology is proving increasingly crucial for the appropriate and comprehensive management of orofacial pain.

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THERAPEUTIC PATHWAYS FOR TRIGEMINAL NEURALGIA WITH CANNABINOIDS: WHAT ARE THE NEW POSSIBILITIES?

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INTRODUCTION

In daily dental practice, it is common to encounter events marked by negative facial expressions or motor interruptions, signs that indicate the perception of intense discomfort usually associated with pain. Pain, in this context, results from the perception of nervous stimuli transmitted to sensory receptors, triggering behavioral responses. It is a frequent complaint in clinics regardless of specialty, both in Dentistry and Medicine. It is worth highlighting that pain has a multifactorial origin. In many cases, it does not have a single defined cause but multiple ones, requiring broader and integrated diagnostic and therapeutic approaches. This means not focusing solely on an isolated factor as a pain trigger. Often, the diagnosis is made by excluding less common causes, which is essential to identify persistent and complex pain conditions that do not always present a clear or immediate clinical response. Pain can also have an alert sensory character: the body signals that something is wrong and may worsen in the future. However, when persistent, it ceases to be just a symptom and becomes a pathological condition itself. Acute or chronic pain can cause tissue damage and significantly compromise quality of life, leading to secondary disorders.

In the realm of orofacial pain, one of the most relevant conditions is trigeminal neuralgia (TN), frequently mentioned in the history of patients with recurrent facial complaints. This condition involves impairment of the trigeminal nerve, the fifth cranial nerve, responsible for the sensory innervation of the face, divided into three main branches: ophthalmic (V1), maxillary (V2), and mandibular (V3). TN pain is usually unilateral, sudden, intense, and short-lasting—seconds to, at most, two minutes—often affecting the maxillary and mandibular branches (V2 and V3). Unfortunately, atypical clinical manifestations and frequently late diagnosis negatively impact patients' lives. This occurs partly because trigeminal neuralgia is considered idiopathic in many cases, meaning there is no single well-defined cause. Light stimuli, such as talking, chewing, brushing teeth, or even feeling wind on the face, can trigger the pain, making diagnosis even more challenging. Therefore, careful monitoring and effective therapeutic approaches are essential.

Pharmacotherapy is often the main option adopted by professionals. However, adherence to conventional treatments does not always result in effective pain relief. Carbamazepine, an anticonvulsant, is the most used drug in treating trigeminal neuralgia. Despite its initial efficacy, prolonged use and high doses may cause significant adverse effects such as bone density loss, motor, hepatic, and renal problems, as well as possible reduction in efficacy over time. Given these limitations, interest in alternative therapies, such as medicinal Cannabis sativa use, is growing. This plant contains active compounds like tetrahydrocannabinol (THC) and cannabidiol (CBD), the latter being the most promising for chronic pain treatment due to its anti-inflammatory and analgesic

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properties without psychoactive effects. CBD has proven to be a viable alternative for patients who do not respond well to traditional pharmacological treatments, offering a new therapeutic perspective. However, medicinal cannabis use still faces obstacles, mainly regarding regulation and social and professional prejudice. Many still associate the plant with recreational use, ignoring its therapeutic potential. Lack of information contributes to this stigma. While some professionals mistakenly believe CBD to be a “cure-all,” others fear that prescribing it could harm their reputation and career. Despite these challenges, studies on CBD use in neuropathic pain treatments are growing, and positive results have gradually influenced the medical community’s view. The expansion of herbal therapies, such as medicinal cannabis, can play an essential role in redefining clinical approaches, becoming one of the most promising strategies for managing various painful conditions.

OBJECTIVE

This study aims to highlight the various factors that contribute to the constitution of neuropathic pain, such as trigeminal neuralgia, from a multisectoral perspective. It starts from the understanding that the causes of chronic pain are closely related to each patient's individuality, making it essential to consider this complexity in the therapeutic process. Although traditional pharmacotherapy continues to be widely used for analgesia, the introduction of medicinal cannabis use stands out as a promising alternative, especially considering the side effects associated with prolonged use of conventional medications. In summary, combining cannabis treatment with an individualized and multiprofessional approach has proven to be an effective strategy for managing chronic pain, offering a viable and safe option for patients.

METHODOLOGY

The methodology adopted in this study is based on an integrative literature review aimed at updating protocols, considering the still limited dissemination of information about cannabis use in orofacial pain treatment. The search was conducted in the PubMed, SciELO, and BVS databases, with specific filters such as publication period (last five years, 2020 to 2025), languages (English and Portuguese), access to full and free texts, and focus on studies directly addressing trigeminal neuralgia, facial neuropathic pain, and recent pharmacological therapies, including cannabis and its derivatives in pain control.

For research structuring, Health Science Descriptors (DeCS) were used, complemented by the MeSH (Medical Subject Headings) database to ensure accuracy in formulating search terms. Search strategies included combinations like ("Trigeminal Neuralgia" OR "Facial Pain") AND ("Cannabis," "Cannabinoids," "Drug Therapy"). Exclusion criteria included articles not addressing facial pain or trigeminal neuralgia directly, those without full texts available, or with therapeutic approaches inconsistent with the research proposal. Based on the descriptors and search strategies mentioned, the following results were identified. The initial search with the described design returned 23,194 articles; after applying inclusion and exclusion criteria, 122 articles remained, of which 8 articles were selected to compose the research coherently with the theme.



RESULTS AND DISCUSSION

The main result of this study relates to elucidating pharmacological and non-pharmacological therapies used in orofacial pain management, including surgical interventions and alternative procedures. Initially, the importance of a multiprofessional approach as a fundamental pillar for adherence to any treatment form is emphasized. In this context, the coordination of interventions adopted in tertiary care aimed specifically at combating trigeminal neuralgia was analyzed. The study was based on the analysis of medical records from a control group of patients diagnosed with trigeminal neuralgia, predominantly with unilateral cases on the left side and only one bilateral case. In summary, the treatment framework analysis allowed classification by therapy type and adherence percentage as an intervention method. Initially, isolated pharmacotherapy (monotherapy pharmacological treatment) was adopted by 21 patients (36.2%), polypharmacy (simultaneous use of multiple drugs such as carbamazepine and gabapentin) was adopted by 16 patients (27.5%), surgical treatment (involving techniques like radiofrequency ablation or microdecompression) was adopted by 49 patients (84.5%), and multifactorial therapy (simultaneous pharmacological and surgical treatment) was adopted by 14 patients (24.1%).

Data analysis reveals that surgical intervention was the predominant approach among patients treated at the tertiary care level. This finding raises several reflections about trigeminal neuralgia management. Although treatment of this condition should be individualized and conducted by a multidisciplinary team, it is common before tertiary care to adopt pharmacological therapies—often limited to monotherapy as the first attempt at pain control. In the present study, the high surgery adherence rate may indicate that many patients did not succeed with medication treatment or showed drug intolerance. This suggests pharmacological control inefficacy in some cases, where pain severity led to a surgical approach necessity. In summary, although pharmacotherapy represents the first line of neuropathic pain treatment, its limitation to conventional analgesics may compromise therapeutic progress. Therefore, it is urgent to consider more updated herbal alternatives, such as medicinal cannabis use. Its compounds, especially cannabidiol (CBD), demonstrate potential to modulate nerve impulses and reduce pain intensity, offering a differentiated and promising response in neuropathy treatment.

According to Souza, A. C. et al. (2023), although carbamazepine is widely used in trigeminal neuralgia treatment, its side effects and limited efficacy drive the search for safer and more effective therapeutic alternatives. In this context, increasing cannabis legalization for scientific purposes has favored research advances on cannabinoid use in pain management. One study investigated cannabinoids' analgesic potential and highlighted the TRPV1 receptor's relevance in developing new therapies for neuropathic pain. The experimental research was performed with animal models (rats) subjected to induced nerve injury to evaluate the effects of different therapeutic interventions—including CBD (cannabidiol), PECS-101, carbamazepine, and combinations of these compounds—on trigeminal neuropathic pain and motor coordination. Results indicate that CBD at 30 mg/kg demonstrated robust antinociceptive effects, including TRPV1 reduction, indicating its potential as an alternative or complementary therapy for trigeminal neuralgia, while 10 mg/kg doses showed no statistically significant effects, suggesting higher doses are necessary for efficacy. Cannabis combined therapy may be more effective; it is understood that CBD combined with TRPV1



antagonists like CPZ potentiates analgesic action, indicating CBD acts, at least partly, through TRPV1 receptor modulation. Although carbamazepine remains an effective option, its side effects limit its use, positioning CBD as a potential therapy with a lower adverse effect profile.

The TRPV1 (transient receptor potential vanilloid type 1) is an ion channel involved in mediating pain and heat sensitivity. Its activation is associated with acute and chronic pain perception, making it a strategic therapeutic target for neuropathy treatment. The study showed that CBD, at high doses (30 mg/kg), reduced TRPV1 expression in the caudal region of the spinal trigeminal nucleus, correlating with decreased mechanical allodynia and hyperalgesia in animals with induced neuralgia.

While carbamazepine acts by inhibiting voltage-dependent sodium channels, CBD appears to modulate vanilloid receptors directly or indirectly, including TRPV1. This may explain its more specific analgesic action and potentially fewer adverse effects. Furthermore, cannabis presents a unique characteristic: its ability to modulate pain without compromising thermal sensitivity, a common side effect in other TRPV1-targeted therapies. This balance prevents loss of body homeostasis, common in treatments resulting in reduced thermal perception. Therefore, TRPV1 channel modulation by cannabinoids, especially CBD, represents a promising approach in orofacial pain treatment, particularly trigeminal neuralgia. Medicinal cannabis stands out as an innovative and effective alternative capable of providing pain relief with lower risk of side effects and better preservation of sensory functions.

FINAL CONSIDERATIONS

It is concluded that cannabinoid use represents a promising therapeutic approach with potential to offer an effective and safe alternative to conventional treatments like carbamazepine, especially considering the side effect profile of these medications. However, adherence to cannabis treatment still faces ideological, social, and legislative barriers. Approval for studies and therapeutic use of the substance remains restricted in many contexts, limiting its advancement and consolidation of more robust scientific evidence. Despite these limitations, medicinal cannabis emerges as a potentially effective strategy for managing neuropathic pain, especially trigeminal neuralgia. Its use, when associated with a multiprofessional approach, can enable a more comprehensive and humanized treatment, becoming a real and necessary alternative in chronic pain management. The future scenario, although still surrounded by regulatory uncertainties, points to the growing inclusion of cannabinoids in the pain therapeutic arsenal, with promising perspectives for clinical efficacy.

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THE USE OF ANESTHETIC GELS FOR MANAGING TEETHING SYMPTOMS: ADVERSE EFFECTS AND CONTRAINDICATIONS – A LITERATURE REVIEW

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INTRODUCTION

Tooth eruption typically begins around six months of age and is a physiological process involving the movement of teeth through the bony structures of the maxilla and mandible until they reach their functional occlusal position. Prior to eruption, the tooth is surrounded by a dental follicle, which serves as a rich source of cytokines, eicosanoids, and growth factors. Evidence from recent studies suggests that these inflammatory mediators may play a role in the onset of the signs and symptoms commonly associated with this developmental stage. [2]

The eruption of primary teeth represents a significant milestone in early childhood development and is often a source of concern for parents due to the emergence of both local and systemic signs and symptoms. Local manifestations commonly include gingival irritation, characterized by red, swollen, and highly sensitive gums, as well as excessive salivation, which may lead to facial or chin rashes and flushed cheeks. During this phase, children may also exhibit systemic symptoms such as fever, irritability, reduced appetite, vomiting, and diarrhea. However, recent studies suggest that these systemic manifestations are not directly caused by the tooth eruption process itself but may instead be attributed to a range of factors inherent to this stage of development. [3]

Given the presence of these signs and symptoms, it is common for parents to seek guidance from pediatricians or pediatric dentists in an effort to better understand the clinical presentation and, most importantly, to identify effective strategies for relieving the infant's discomfort. However, it is important to highlight that some commonly recommended methods for symptom relief remain controversial, particularly when comparing the clinical approaches adopted by pediatricians and pediatric dentists, which often differ in terms of the most appropriate therapeutic interventions. [2]

Among the pharmacological and non-pharmacological methods used to relieve local symptoms associated with tooth eruption, topical anesthetics stand out as the most common and widely used. Lidocaine-based preparations, often compounded on an individualized basis, are readily available in pharmacies. Nevertheless, recent studies have shown that despite their widespread availability, the use of these agents is not recommended by several professional organizations for the management of teething-related symptoms. The primary concern involves potential adverse effects linked to topical lidocaine use, including the risk of overdose. An increasing number of case reports have documented adverse reactions of varying severity, as well as accidental ingestions, particularly in infants and young children, both for teething purposes and other oral conditions. [2]

Understanding the adverse effects and potential risks associated with the use of topical anesthetic gels in infants is of critical importance for both parents and healthcare professionals involved in pediatric care. Investigating safer alternative methods, as well as providing scientific support for the contraindications of these products, is essential to ensure the promotion of health and

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well-being of children during the teething period.

Therefore, this study aims to analyze the use of topical anesthetics for the relief of teething symptoms, highlighting the reasons for their contraindication through a literature review.

METHODOLOGY

Based on the proposed objective, a literature review was conducted. A literature review is a critical and systematic survey of previously published studies on a specific topic, aimed at contextualizing the research problem within the existing body of knowledge. It seeks to synthesize and organize theories, methods, and results in an integrated and critical manner, identify gaps and contradictions within the field, and thereby support and guide the proposed research. This process goes beyond a simple summary to build a solid theoretical foundation that directs the development of the study.

The bibliographic survey was conducted in June 2025. Data were collected using the Virtual Health Library (BVS) and PUBMED databases, applying the following search strategy: “Teething AND Anesthetic gel AND Adverse effects,” “Signs OR Symptoms AND Tooth Eruption,” AND “Local Anesthetics” AND “Pediatric Dentistry.” An initial total of 454 records was retrieved without applying filters. Based on this initial screening, the inclusion criteria were defined as follows: full-text articles, available in their entirety, published between 2015 and 2025, resulting in 20 articles. Titles and abstracts were then reviewed, applying the exclusion criteria: course completion papers, literature reviews, duplicate documents, studies not directly related to the subject matter, and those with restricted access. After applying these criteria, 7 articles were selected for the study.

RESULTS

During the tooth eruption process, the manifestation of certain signs and symptoms is common. However, despite the wide variety and quality of studies on the topic, there is still no consensus in the literature regarding the exact etiology of these manifestations. The results demonstrated that scientific evidence suggests the onset of primary dentition coincides with the so-called “discovery phase” of the infant, characterized by increased frequent contact with potentially contaminated surfaces. ^[5] ^[2]

A study evaluating infants aged 6 to 8 months during initial pediatric consultations demonstrated that certain clinical manifestations may occur either in isolation or in combination. The most frequent signs observed were fever (16%), excessive salivation (12%), diarrhea (8%), fever combined with salivation (15%), fever combined with diarrhea (8%), salivation combined with diarrhea (6%), and the combination of fever, salivation, and diarrhea in 3% of cases. ^[5]

The management of children during the tooth eruption period may be interpreted differently by pediatricians, pediatric dentists, and caregivers. Since it is widely recognized that symptoms associated with tooth eruption tend to be self-limiting, these symptoms are often underestimated by pediatricians, as evidenced by the frequent prescription of both oral and topical anesthetics and anti-inflammatory drugs. In the dental field, there is an increasing preference for non-pharmacological methods to relieve symptoms, such as the use of chilled teething rings and silicone massagers. However, some professionals still recommend topical anesthetic gels for controlling local manifestations. ^[5]



It is important to emphasize that symptoms related to mild illnesses or even serious conditions can be mistakenly attributed to teething by both parents and healthcare professionals. This misperception may hinder the proper identification and management of the child's developmental needs and may also lead to delays in diagnosing potentially serious diseases.^[3]

The use of pharmacological methods in pediatric patients is considerably limited. Whenever drug administration is necessary, the lowest effective dose is recommended. This precaution becomes even more relevant in the context of using topical analgesics for relieving symptoms associated with tooth eruption, representing a major concern regarding the safety and efficacy of these interventions. Commercially, gels containing 2% lidocaine are widely available, including compounded preparations that claim to alleviate teething-related symptoms. However, determining the appropriate dosage for this type of use is complex, and excessive application may lead to systemic toxicity, posing a significant health risk to the child.^{[4] [6]}

The application of anesthetic gels in the oral cavity presents significant limitations regarding the control of the actual administered dose, as the product quickly mixes with saliva, increasing the risk of accidental ingestion. This risk is heightened in situations where the child exhibits hypersalivation and is crying or drooling, which are common manifestations during tooth eruption. Swallowing the anesthetic may also lead to anesthesia of the oropharyngeal mucosa, elevating the risk of aspiration and constituting a clinically relevant concern.^[4]

Systemic toxicity is caused by repeated and excessive use and can easily occur in infants and children, who are among the high-risk groups. When ingested orally, lidocaine has an estimated systemic bioavailability of 30% to 35%. However, in cases of aspiration, absorption occurs directly through the respiratory tract, allowing the substance to reach the central nervous system (CNS) without undergoing first-pass hepatic metabolism. Another anesthetic commonly used in preparations to reduce symptoms in pediatric patients is benzocaine, which, when used at high concentrations, can induce methemoglobinemia, leading to anemia, cyanosis, and hypoxia.^[6]

The most common clinical signs of toxicity are related to the central nervous system (CNS) and are attributed to the selective blockade of cortical inhibitory synapses. The symptoms most frequently observed include agitation, mental confusion, coma, hearing loss, respiratory depression, seizures, and visual disturbances. In addition to neurotoxic effects, lidocaine may also trigger cardiovascular adverse events, although less frequently. These include cardiac arrhythmias, alterations in cardiac conduction, and, in more severe cases, cardiac arrest. Cardiovascular manifestations typically occur in later stages of toxicity, preceded by evident neurological signs.^{[1] [2] [3]}

Currently, other pharmacological methods considered safer are being continuously investigated as alternatives to topical lidocaine anesthetic gels, especially for alleviating teething symptoms in children. A promising example is Camomilina C, a herbal product formulated from extracts of *Chamomilla recutita* (chamomile), a plant known for its anti-inflammatory and soothing properties. Furthermore, recent studies have demonstrated that gels containing hyaluronic acid also show clinical efficacy and a favorable safety profile, representing a viable therapeutic alternative for this age group.^{[2] [1]}



CONCLUSION

The study concluded that an integrated approach between pediatricians and pediatric dentists regarding the risks associated with the use of topical anesthetics during the tooth eruption period is essential. Although this approach is often considered a quick and low-cost alternative to relieve symptoms, its indiscriminate use—driven by parents' urgency to provide immediate relief to the child—can pose a significant risk to pediatric health. In practice, the frequency of application tends to correspond with the intensity of symptoms, without proper control of the administered dosage.

Therefore, appropriate guidance to parents during this period is crucial to prevent unsafe practices. Furthermore, ongoing professional education on less invasive and safer therapeutic methods is indispensable. Raising awareness about the risks related to the improper use of these medications constitutes a key strategy to reduce and eventually eliminate this practice in clinical settings.

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MANAGEMENT OF PEMPHIGOID WITH PERSISTENT ORAL LESIONS: FOUR YEARS OF CLINICAL FOLLOW-UP

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INTRODUCTION

Autoimmune in nature, pemphigoid represents a group of lesions in which tissue-bound antibodies target one or more components of the basement membrane. Generally, its types are known as mucous membrane pemphigoid (MMP) and bullous pemphigoid (BP). Despite having similar names, the presentation of each condition differs, making it essential to understand them for accurate diagnosis. Mucous membrane pemphigoid typically occurs in adults, with an average age between 50 and 60 years, and women are more frequently affected than men. Lesions can be observed in the oral mucosa; however, other mucosal surfaces may also be involved, such as conjunctival, nasal, laryngeal, vaginal mucosa, and skin.⁽¹⁾ Immunologically, mucous membrane pemphigoid is characterized by autoantibodies that bind to the basement membrane zone, with molecular targets varying according to the clinical form, which may include BP180, laminin 5, and other structural components of this region. Bullous pemphigoid, on the other hand, is the most common form of autoimmune blistering disease and tends to develop in elderly patients, usually between 75 and 90 years of age. In the oral mucosa, BP lesions begin as blisters that tend to rupture quickly, resulting in shallow ulcers with flat, well-defined borders. Although it resembles mucous membrane pemphigoid in many aspects, including oral manifestations, BP differs by having a clinical course usually limited to the oral mucosa. Immunologically, BP is characterized by the production of IgG autoantibodies that bind to BP180 and BP230 antigens located in the hemidesmosomes of the basement membrane zone, triggering separation between the epithelium and connective tissue. Diagnosis can be made through a biopsy of the lesion, where histopathological features show separation between the epithelium and connective tissue at the basement membrane zone, resulting in a subepithelial split. Diagnosis can also be established by direct immunofluorescence, considered the gold standard for differentiating such lesions. This process involves incubating the sample with an antibody that binds to the desired antigen, followed by washing to remove excess antibody, and finally, observation under a fluorescence microscope.⁽²⁾ Treatment is based on corticosteroids, which can be topical or systemic. These drugs are effective in modulating the inflammatory response since they act at the beginning of the inflammatory cascade, specifically by inhibiting phospholipase A2, thereby reducing the production of prostaglandins, thromboxanes, and leukotrienes. They may be combined with laser therapy, as low-level laser therapy (LLLT) in the red wavelength acts on more superficial tissues such

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as mucosa, skin, wounds, and areas near the surface, making it suitable for superficial ulcers, oral lesions, and stimulation of gingival epithelium. Additionally, its infrared wavelength acts on deeper pain and inflammation, promoting analgesia and reducing pain from ulcerated lesions in the oral cavity. It also exerts anti-inflammatory effects by influencing vascular permeability and modulating prostaglandins, reducing edema and erythema in the affected region. ^(3,4)

OBJECTIVE

To report a case of bullous pemphigoid diagnosed and followed from 2020 to the present at the Oral Medicine Outpatient Clinic of the Federal University of Ceará – Sobral Campus.

CASE REPORT

An elderly female patient presented to the Oral Medicine Outpatient Clinic in 2020 with complaints of symptomatic lesions. The lesions appeared as ulcers located on the upper and lower alveolar ridges. Over four years of follow-up, the lesions maintained similar characteristics, alternating between periods of healing and recurrence.

In the first year, intraoral examination revealed intensely erythematous lesions with extensive ulcers. The patient reported severe pain and difficulty eating properly. Based on these findings, an immune-mediated (autoimmune) lesion was suspected, and a treatment protocol with continuous follow-up was initiated.

The initial therapeutic protocol consisted of topical corticosteroids combined with low-level laser therapy. Due to the lack of significant improvement and persistent pain, systemic corticosteroids were prescribed, starting with higher doses followed by gradual tapering.

In the second year, lesions showed signs of improvement, evidenced by reduced erythema. The protocol maintained laser therapy along with occasional topical corticosteroid use.

In the third year, new ulcerated lesions appeared in other areas, such as the palate near the midline, extending to the ridge and gingiva. Erythematous coloring was observed in both the maxillary and mandibular vestibular gingiva, indicating an active disease phase and clinical worsening. In these situations, the protocol included systemic corticosteroids associated with laser therapy.

In the fourth and current year, the patient's oral mucosa showed significant improvement compared to previous extensive ulcerations. However, detailed intraoral examination still revealed localized erythematous areas with erosion. Throughout treatment, different forms of corticosteroids and laser therapy were used. An excisional biopsy of a blistered lesion confirmed the presence of a subepithelial split. Laser therapy was performed with both red and infrared wavelengths, with energy doses gradually reduced as remission occurred.

DISCUSSION

During treatment, improvement was noticeable with the combined use of corticosteroids and laser therapy. Corticosteroids modulate the inflammatory response by acting at the beginning of the inflammatory cascade, preventing excessive inflammation. They can be used topically or



systemically, as in this case, where the patient used dexamethasone elixir mouth rinses. Prednisolone was also administered systemically, especially in cases of extensive and painful lesions where topical treatment alone would not suffice. In such cases, it is essential to limit treatment duration due to potential side effects and gradually taper doses to prevent adrenal insufficiency. Low-level laser therapy accelerated tissue repair, resulting in progressive improvement of erythematous and ulcerated regions due to its biostimulatory, anti-inflammatory, and analgesic effects. Advantages of laser therapy include its non-invasive, painless nature, and the ability to perform frequent sessions without significant side effects. ^(3,4,5)

CONCLUSION

Knowledge of the behavior of oral lesions is essential for proper clinical management. This case highlights the importance of combining systemic and topical medications with low-level laser therapy, an effective adjunct in the treatment of oral lesions, contributing significantly to improving patients' quality of life.

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