

CONSERVATIVE SURGICAL APPROACH OF A MANDIBULAR INFECTED BUCCAL CYST IN A PEDIATRIC PATIENT

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Aim: the aim of this case report is to describe the surgical excision of a mandibular infected buccal cyst in a 10-year-old patient and to report its histopathological analysis.

Methods: the clinical examination of a 10-year-old male revealed a delayed eruption of the right mandibular first molar that was investigated with an orthopantomography. The radiograph showed a radiolucency involving the area between the right first and second molars. The following CBCT revealed that the lesion was on the buccal aspect of the roots of the first molar. Based on the clinical and radiological appearance of this lesion, it was assumed that it was a mandibular infected buccal cyst. Therapy consisted of a cystectomy, with particular attention not to damage the adjacent anatomical structures. The biopsy of the excised lesion was performed.

Results: the histological evaluation revealed a chronically inflamed cyst lined by a non-keratinized stratified squamous epithelium, that was consistent with the diagnostic hypothesis. The postoperative course was uneventful and the three-months follow-up orthopantomography proved a correct dental and bone evolution on mandibular right molars side.

Conclusions: the mandibular infected buccal cyst is an inflammatory odontogenic cyst that occurs on the buccal and lateral aspects of the roots of mandibular molars at the eruption time.

The inflammation may have an important role in the pathogenesis of this lesion and a conservative surgery aimed at the enucleation of the lesion without extraction of the involved dental elements appears to be the therapy of choice.

OPTICAL COHERENCE TOMOGRAPHY USE FOR ENAMEL DEFECTS IN MOLAR INCISOR HYPOMINERALIZATION

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Aim: Molar Incisor Hypomineralization (MIH) is defined as a hypomineralization of systemic origin of one to four first permanent molars (FPMs) frequently associated with affected incisors, but it could also affect any primary or permanent teeth. MIH can cause several clinical problems such as hypersensitivity, high risk of pulp involvement, tooth loss and aesthetic issues. Optical coherence tomography (OCT) is an emerging hard and soft tissue imaging system investigated as a new potential diagnostic method in dentistry. The aim of this study is to evaluate the *in vivo* enamel structure of MIH patients and related specific OCT scans.

Methods: a total of 20 moderate MIH permanent teeth of pediatric patients (n = 10 incisors, n = 10 FPMs) were tested and 20 healthy teeth (n = 10 incisors, n = 10 FPMs) were con-

trols. The most representative OCT scans were recorded, analyzed and compared.

Results: on OCT scans, healthy enamel and dentin appear as two superimposed distinct layers divided by the dentin-enamel junction while the hypomineralized areas of MIH teeth are characterized by subsurface bright hyper-reflective areas followed by deep hypo-reflective shadowing.

Conclusions: OCT is considered a promising assessment study method for identifying structural models of enamel defects *in vivo*; but, to date, there is a lack of standardization in identifying patterns of different MIH severity. This study provides a basis for this orientation, supporting the use of OCT as a risk-free technique for the validation of remineralization treatment in pediatric patients.