

ABSTRACT

festations. Hipermobility type is also tied to a sort of inefficacy of local anesthesia, most likely to an excessive dispersion of the local anesthetic in the tissues. Chronic pain is a serious complication of the condition and can be both physically and psychologically disabling. Psychological dysfunction, psychosocial impairment, and emotional problems are common. On a molecular and microscopic level, EDS is characterized by alterations of extracellular matrix: collagen fibrils are organized into tissue-specific macroaggregates because of a disorder of fibrillar collagen metabolism; there's also an increase of Mast cells (MCs) number or an increase MCs activity due to a Mast cell activation disorder (MCAD). MCs exhibit different biological properties: phagocytosis, antigen presentation, cytokine production, and the immediate release of vasoactive substances. The aim of this paper is to describe our experience with a EDS patient that come to our attention after local anesthesia multiple failures.

CASE REPORT: The patient was a 44-year-old woman affected by EDS-HT, rheumatoid arthritis, fibromyalgia, hyperinsulinaemia and thrombophilia. She has come to our attention because she was feeling pain in right and left upper molar regions due to destructive decays of 1.6 and 2.6; it was decided to extract both the teeth. The preliminary visit showed that the patient referred a bad experience with her previous dentist with an extreme pain during previous treatments. On the day of surgery the patient underwent sedative and analgesic premedication with 10 drops of Diazepam and Paracetamol 1000 intravenously, local anesthesia (Mepivacaine + Adrenaline 1:100.000) and a painless surgical technique like pulling mobile tissues and compressing not mobile tissues during anesthesia. Postoperative treatment consisted in 3 more days of Amoxicillin + Clavulanic Acid 1g, Paracetamol 1000mg on demand and Chlorhexidine 0,2% mouthwashes for a week. After 7 days suture was removed.

DISCUSSION: Vasodilatory activity of MCs may be an important aspect of the observed resistance to local anesthesia in EDS patients. Infact anesthetic residence time in the site of injection depends on blood flow: if blood flow increases, the anesthetic is quickly removed and its efficacy shorter. Furthermore, not all local anesthetics have the same duration of action, it depends on active substances and on efficacy as pharmacokinetic parameter. We have investigated the better anesthetic to use in patients affected by EDS - HT because different active substances have different effects: for example, Mepivacaine with Adrenaline could remain in place for a longer period of time than Lidocaine.

CONCLUSIONS: Our main target is pain control. It's important to investigate patient previous experiences with anesthesia, be flexible choosing local anesthetic and do some tests to find the effective one. Sedative premedication can be useful to control anxiety and pain perception. Local vasoconstrictor in anesthetic management of EDS patients is essential in absence of contraindication.

Intraoral ultrasonography in oral pathology: a narrative review

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BACKGROUND: Ultrasonography has been used in medical fields for decades, but nowadays recent progress in tech-

nology have led to the applications in many maxillofacial procedures.

The introduction of latest generation equipments, different sizes of transducers, ultrasound (US) elastography and Color-Doppler has provided enhanced spatial resolution. US is generally used transcutaneously; however, intraoral US has recently been drawing more interest. US possible applications ranges from pre-operative evaluation to post-operative management of patients. US is harmlessness, non-invasive, effective cost, repeatable and avoid of metal artefacts caused by dental restorations. Disadvantages of US include difficulty in imaging intraboned structures and its dependence on a trained operator. The aim of this narrative review is to analyze the potential role of intraoral US in oral pathology, showing possibilities and limits of this technique in daily clinical practice.

METHODS: Bibliographical research was performed using PubMed and Embase databases, selecting original articles published from January 1990 to February 2018. The following keywords and the Boolean operators "AND" and "OR" were used in combining more keywords: "ultrasound, ultrasonography, intraoral, oral cavity, oral cancer, oral vascular lesions, oral vascular malformations, salivary glands, scialothiasis". We excluded from this search: articles not published in English, case reports, letters to the editor and/or no-human studies. Images were intraorally obtained with an E-CUBE 15 EX scanner (Alpinion®, Seoul, Korea) with an 3-12 MHz and 15 MHz transducers.

RESULTS: 158 publications were identified. Intraoral US can be clinically applied in oral pathology to evaluate oral vascular lesions, soft tissue diseases and salivary gland disease. About oral vascular lesions, Color Doppler US is an effective tool in the management of vascular anomalies by obviating, in many cases, the need for biopsy. Specifically, Color-Doppler spectral curve analysis of a blood vessel determines the haemodynamic characteristics, in order to plan the most appropriate and safety treatment. Furthermore, Werner and Miyazaki have suggested the use of US for driving laser fiber insertion in the intraoral photocoagulation in the vascular malformations treatment. About soft tissue diseases, recent studies have evaluated the use of US to evaluate pre-operatively tumor thickness and tumor depth in early oral cancer, in order to establish the need for neck-dissection. In fact, the decrease of tumor size corresponds to a reduced specificity and sensitivity of Computer Tomography (CT) and Magnetic Resonance Imaging (MRI). Intraoral US represents an imaging tool for oral palpable soft tissue swellings such as lipomas, lymphangiomas, liposarcomas, shwannomas. According to Gaspari and Wong, US is extremely useful in facilitating the diagnosis of abscesses and delineate their anatomic location, differentiating them from cellulitis. About salivary gland diseases, a near unanimity of authors consider US the first choice in the detection of salivary glands diseases; recent studies have shown the validity and reliability of US in the detection of small ductal calculi, while transcutaneous US is recommended for intraparenchymal calculi.

CONCLUSIONS: Since the recent improvements, US offers new prospects in oral pathology with a features and utility comparable with CT and MRI. Unfortunately, US is considered one of the most complex examinations to be interpreted, requiring a specialist with deep knowledge of the head-neck area. In conclusion, US should become an integral part of diagnostic flow chart in oral pathology.