Demystifying the Treatment of Teeth with Inflammatory External Root Resorption, According To the Pulpar Condition

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Opinion

Dental resorptions, conditions in which mineralized dental tissues are eliminated by clastic cells on their surface, persist as a treatment challenge for dentists. Although the causes and mechanism of its occurrence are known, many doubts have been observed in its handling, which motivated the making of this article. Dental resorptions in permanent teeth are pathological and, according to their mechanism of occurrence, can be classified as inflammatory and substitutive [1-3]. Clinically, they are asymptomatic and do not induce pulpal, periapical, and periodontal changes, and is usually the consequence of them [4]. The inflammatory tooth resorption occurs when the cementoblasts are removed from the root surface, resulting in a bare dental surface that allows the installation of clasts units, associated with an inflammatory process induced by the aggressor agent [3,4]. The causes may be multiple, especially pulp necrosis, excessive orthodontic forces and alveolodentary trauma. The factors may or may not be associated [1-3].

The substitutive resorption consists of replacing the resorbed tooth tissue with bone tissue, resulting in dental ankylosis [1-3]. Occurs when there is destruction of the Malassez epithelial remains of the periodontal ligament. The main cause is dental traumatism [4]. Although several therapeutic alternatives are being tested in an attempt to prevent or slow down the substitution resorption process, it has not yet been possible to terminate the process when established [1-3,5]. The treatment of external inflammatory root resorptions consists basically in the removal of its cause. In cases of teeth with damage to the cementoblasts and with pulp necrosis, especially traumatized teeth, the bacterial contents that are externalized through dentinal tubules may result in external inflammatory resorption. In this case, adequate endodontic treatment will be indicated and reabsorption will be repaired [1-3].

However, in cases of teeth with pulp vitality that present external inflammatory root resorption, other causal factors, except for the pulpal condition, should be considered as causes of resorption, such as excessive orthodontic force. In this case, since the pulp condition is vital, and there is no microbial content inside it, performing endodontic treatment is unnecessary and contraindicated, except in cases where dental devitalization is desired for prosthetic purposes and the damages justify the benefits. In addition, although very close to the pulp, either internally or externally, dental resorptions do not induce necrosis of the pulp tissue [3,4], since the pulp space and contents are protected inside the root canal by the pre-dentin [1]. The clasts in progression, coming from the inflammatory resorption gap, when they approach the dentin adjacent to the pulp, are faced with the pre-dentine, which prevents the fixation of the same. However, in the meantime, pre-dentin, in the face of the aggression caused by the resorption process, mineralizes itself, maintaining the pulp contour, conferring, naturally, protection to the pulp [3].

Considering this fact, teeth with a vital pulp condition and external inflammatory root resorption, when submitted unnecessarily to endodontic treatment, may present a greater progression of the resorptive process, since the protective pre-dentin of the conduit will be removed. Thus, teeth with external inflammatory resorption and pulp vitality should preferably be treated by removal of the resorbing agent and, where appropriate, indicated and possible, curettage of the resorption gap. Considering that reabsorption is not multifactorial, clarity in its identification through detailed clinical and imaging exams, culminating in correct diagnosis, are essential for a good prognosis.

References


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