Letters to the Editor

Developmental disturbance of maxillary lateral incisor after trauma

Dear Editor,

The subject of the case report presented by Tozoglu et al. (1) is of great importance in dentistry as epidemiologic studies report a damage variation from 12% to 69% in permanent teeth after traumas to primary teeth (2).

Regarding the case report, however, it is discussed that the trauma suffered by the child was the first and only one. In the intraoral photograph, besides the intruded maxillary right tooth, relevant alterations of the upper left incisors can be observed. Coronary fracture of the left central incisor in association with dark discoloration, rotation, and alterations in the enamel structure were also seen, similar to a hypoplasia in the lateral incisor on the same side. Radiographically, both central incisors were found to have thickened periodontal ligament, suggesting pulp alteration. The periapical radiograph of the region taken laterally and extraorally using periapical film enables visualization of the affected teeth (3).

The treatment reported consisted of the extraction of intruded and impacted elements. There are, however, different approaches towards root dilacerations such as the orthodontic traction. Although not reported by the authors, it is obvious that the factors determining the treatment plan towards this kind of trauma are clearly related to both the degree of root dilacerations and the time of diagnosis.

Furthermore, the elements photographed after the extractions were not identified, which generated doubts. According to the literature, intrusion occurs most commonly in primary teeth of children aged between 1 and 3 years old (2, 4) and the damages to the permanent successor will depend on the developmental stage of the germ at the moment of trauma (5). In the case report, questions can be raised regarding the age of the child at the moment of trauma as well as its relationship with primary right maxillary lateral incisor and kind of effect suffered by the permanent successor, as it is also possible to visualize coronary alterations in the permanent tooth.

The treatment, in this case, has the main objective of restoring function, normal development of the arch, aesthetics, and most importantly, the self-esteem of the patient. It is also important to note that the lack of treatment and follow-up care for dental trauma in child and adolescents may affect their social interaction skills and their families as well, thus reducing their quality of life (6).

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Response to 'Developmental disturbance of maxillary lateral incisor after trauma'

Dear Editor,

We are grateful to your correspondent for opening the debate on our letter.

The aim of the case report presented by Tozoglu et al. (1) was to report a developmental disturbance of a permanent maxillary lateral incisor in a 12-year-old girl with a history of trauma.

In this case report, although the patient had another history of trauma causing coronary fracture of the left central incisor about 1 year ago, it had not been emphasized, because it was not related to the intruded maxillary right tooth.

Treatment of teeth that have undergone intrusive luxation is controversial, and no optimal treatment has been determined. There are some treatment alternatives (2):

- *In the primary dentition*, It is extremely difficult to treat such injuries and there is an ongoing discussion about the advisability of extracting the intruded teeth, as opposed to wait and assist their natural repositioning using non-invasive techniques aimed at the maintenance of the eruptive space in the dental arch (3). The permanent successor develops lingual to the primary incisor. If the intruded tooth impinges on the permanent tooth, the primary tooth should be extracted immediately and as atraumatically as possible to prevent injury to the permanent tooth bud. Proper extraction techniques are used to prevent further injury of the developing tooth germ. If the intruded tooth is facially displaced and appears not to have involved the permanent successor, the tooth should be allowed to re-erupt spontaneously.
- *In the permanent dentition*, immediate surgical repositioning of the tooth into its proper place in the arch can be carried out. However, there is a greater incidence of external root resorption, increased risk of sequestration, and marginal bone loss.
- The tooth can be allowed to re-erupt if the tooth is immature.
- Low force orthodontic repositioning of both immature and mature teeth that have undergone intrusive luxation can be carried out over a period of 3–4 weeks to arrest pulp necrosis and external root resorption, which has been found 96% of fully formed intruded teeth (2).

Surgical removal of the teeth was the beneficial solution for this case, because the patient was referred to the clinic very late, shape and size of the teeth were not suited for the orthodontic rehabilitation, and the patient did not admire orthodontic treatment approach.

The highest prevalence of developmental disturbances of permanent teeth is found after intrusive injuries of primary teeth (4–6). Intrusion can occur not only in early ages (1–3 years), but also at ages 3 and 5 years (6, 7). The extent of the malformation depends on the developmental stage of the permanent tooth and intensity of the trauma. A trauma in the primary dentition may affect the coronal or root region or the whole of the permanent tooth germ (5). Crown dilaceration occurs in cases with trauma at an age between 1.5 and 3.5 years, and root malformation between 4 and 5 years of age (8).

Follow-up care for dental trauma is very important for young patients (4). After surgery, the patient was referred to the pediatric dentistry clinic for further follow-up.

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Delayed multidisciplinary management of an extrusively luxated maxillary central incisor

Dear Editor,

We would like to comment on the article 'Delayed multidisciplinary management of an extrusively luxated maxillary central incisor' by Sübay et al., that appeared in your journal (1).

First, the authors omitted from the heading and the summary that two teeth were affected by trauma. Clinically, the right central incisor was extrusively luxated while the left central incisor had a horizontal crown fracture, which might have been commented and discussed.

The case report is rather confused because the authors reported that the crown of the left central incisor, which was fractured horizontally, was intact and diagnosed as non-vital after cold and electric pulp tests. After that, they reported that the same tooth was vital, thus contradicting what was previously said by them and diagnosed by the tests.

Performing an electrical pulp test seems to be questionable as the left central incisor already had a pulp exposure and, therefore, endodontic therapy would be indicated. According to Radhakrishnan et al. (2), electric and pulp tests can present false-positive results only if the pulp vascularization is compromised. These testing methods were described as having the disadvantage of producing