

# Triple Impact, Central Incisor, Lateral Incisor and Canine, Caused by Pediatric Dental Trauma (Case Report)

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**Abstract:** *The etiologic factors of the impacted teeth are numerous. One of them is dental trauma at the pediatric age. Almost all children during the growth process may fall and hurt their teeth. If the injury is such as to move the permanent or temporal teeth it will lead to malocclusion. We will present a clinical case that a trauma at the age of five is followed by triple impaction (21, 22, 23), as well as the orthodontic-surgical treatment of the case.*

**Keywords:** Trauma, impacted, orthodontic-surgical treatment

## 1. Introduction

Impacted tooth is a common occurrence in dental clinics. The most common are mandibular third molars [1], but after them there are maxillary canines with an incidence of 0.8-5.2% ratio of the population [1.2]. Impacted central incisors are less common, or might be mesiodens, while impacted lateral incisors is rare, more often is referred to delayed eruption or agenesis. Meanwhile, treating the impacted teeth all three together is even rarer.

The etiologic factors of the impacted teeth are numerous and complex. They are case-by-case. Among the etiologic factors are dental traumas at the pediatric age. [1]

Dental trauma is an important chapter and of great interest in oral pathologies. Various authors have compiled statistical data showing that traumas are an important factor in damaging the teeth until their loss [2].

The loss or damage of the teeth, especially the anterior ones, is not just a dental problem; it has a great psychological impact on both the parents and the child. Dental trauma of deciduous teeth are associated with effects that affect the permanent dental system causing malformations, a delay in eruption in about 40% of cases [3]. Dental trauma can lead to a lack of eruption in three ways; follicular damage from temporary trauma to the teeth, follicular displacement as a result of premature permanent tooth loss or permanent tooth damage. [8]

Children are more exposed and often more careless with traumatic situations. Physical activities are a basic necessity for their growth and development. In pre-school and school age they play actively in nature. Negligent moments such as loss of balance or uncoordinated movements increase the likelihood of trauma.

## 2. Clinical Case

A female patient, age 14, birthplace and place of residence in rural areas, is presented to a dentist; with the main

complaint that the central incisor, lateral incisor and canine teeth haven't erupted yet.

Anamnesis: Parents say that at the age of 5 while she was playing outside the girl has suffered trauma in the upper teeth. As the results of trauma she lost the deciduous maxillary left central incisor and few gingival wounds and laceration. They went to the doctor of the community residential center, who settled and calmed them with the fact that the tooth she lost is a temporary tooth and soon will be replaced.

No additional examinations had been made, or counseling and follow up to prevent the consequences in the permanent dental system in the future.

Meanwhile, the deciduous lateral incisor has been lost after two years as a result of excess mobility. She had no more contact with the dentist and for several years waited for the permanent teeth to erupt.

Clinical examination; Lack of 21, 22,23. The persistence of deciduous tooth number 63. Permanent tooth number 11 has shifted mesially, and her phonetic aspect is affected.

## 3. Panoramic Examination



#### 4. Study Models



Diagnosis; 21, 22, 23 impacted as a result of trauma. Trauma has caused premature loss of deciduous teeth, misplacement of permanent teeth follicles.

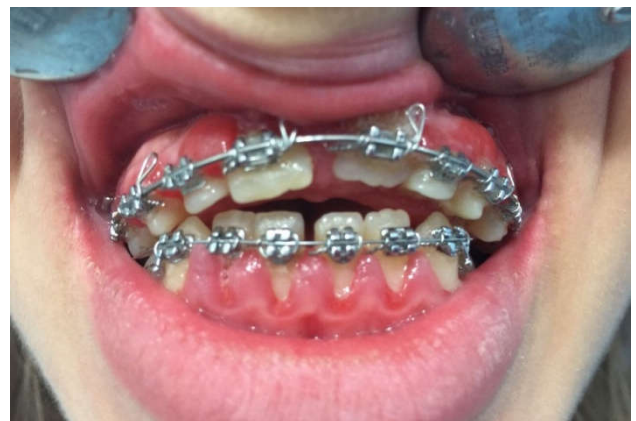
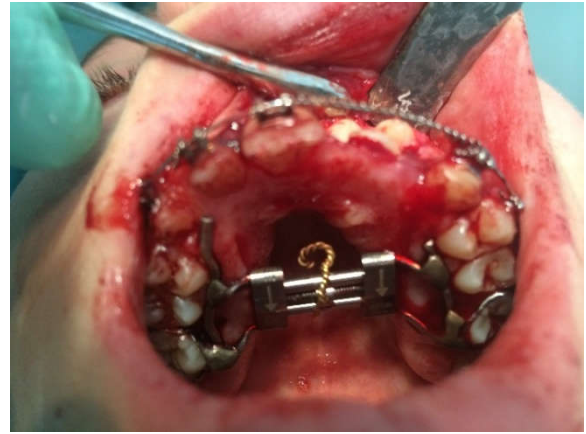
The premature loss of deciduous teeth has a major role in the etiology of many anomalies of the teeth and jaws. Early loss is called when it is more than 6 months from the regular replacing time. [7]

Treatment plan; orthodontic-surgical treatment.

Orthodontic treatment started immediately after diagnosis, with RPE active for a month and then fixed orthodontic treatment.

The surgical treatment was applied 6 months after the start of orthodontic treatment, with local anesthesia, vestibular mucoperiosteal flap technique from 11 to 24. Deciduous tooth number 63 is extracted. Detection of vestibular surfaces of 21 and 23 from alveolar bone. Tooth number 22 was covered only with oral mucous membranes. The detection was done without crossing cemento-enamel junction. Setting braces, suturing of the flap (closed method).

The tooth traction started in a row, the canine, the lateral incisor and the central incisor.



#### 5. Conclusions

Dental trauma of deciduous dentition has significant consequences in the permanent dental system. They should be considered and treated as emergencies. Treatment need to be complex by evaluating any anatomical tissue and structure involved or in the vicinity of trauma. Tracking and

timely treatment of later complications as a result of trauma is used to preserve the site in the event of premature deciduous tooth loss.

In the clinical case, the orthodontic-surgical treatment was the right choice, with satisfying aesthetic and functional results.

Possible complications are root resorption, more endangered is tooth number 22, and marginal periodontal teeth at the end of treatment.

In the reported case, the problem might be maintaining a rigorous hygiene throughout the treatment time. Lack of oral hygiene can cause general gingivitis which on the other hand can alter the results of the treatment.

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