Abstract

The impaction may be primary, meaning that the teeth never have been erupted or it may be secondary, meaning that the teeth after eruption are reimpacted. Although impaction of permanent teeth is relatively a common finding, the lack of eruption of primary tooth is apparently a rare finding. When it occurs it is almost always a mandibular molar.

The exact factor of primary teeth submersion has not yet determined. Suggested factors are ankylosis, congenitally missing permanent teeth, defects in the periodontal membrane, trauma, injury of the periodontal ligament, precocious eruption of the first permanent molar, defective eruptive force, or a combination of these factors. Mainly, the local and genetic theories have attempted to clarify the causal agents in the etiology of infra occlusion. Extraction has been widely recommended as treatment, in order to prevent complications. In this case report u a case of primary impacted deciduous tooth which is a very rare finding.

Case report

An 18-year-old female presented to the department of oral diagnosis, King Khalid University female campus with a complaint of spontaneous and repetitive pain in the mandibular left back region. The family’s history revealed that her mother was treated for impacted teeth. Extra oral examination and medical examination was noncontributory. The Mandibular left second premolar was clinically absent (fig 1).the first molar was restored and was pop positive on vertical and horizontal percussion, it was also tilted mesially. Panoramic and periapical
radiographs revealed an impacted second deciduous molar and impacted premolar close to the lower border of the mandible, and below the adjacent first permanent molar (Figure 2). The adjacent first permanent showed root resorption. Orthodontic consultation was done and due to deeply placed deciduous and permanent premolar and noneruptive position of the permanent premolar, and damage to the adjacent tooth extraction was planned.

**Discussion**

Primary teeth may be retained for a variety of reasons, the most common being developmental absence of the permanent successor. While agenesis of primary teeth is rare (0.1-0.9%)[1], absence of permanent teeth is encountered relatively frequently with a prevalence of 2.5-6.9% [2]. The exact factor of primary teeth submersion has not yet determined. Suggested factors are ankylosis, congenitally missing permanent teeth, defects in the periodontal membrane, trauma, injury of the periodontal ligament, precocious eruption of the first permanent molar, defective eruptive force, or a combination of these factors. From all of the cited etiological factors, ankylosis seems to be involved in the majority of cases or at least as a coexisting factor [3]. Genetics has an important role in development. A generalized developmental delay is seen in patients with syndromes.

Submerged primary molars may cause several problems in dental arch such as space loss, tipping of adjacent teeth, and supra-eruption of the antagonists and dislocations of permanent teeth lying under the primary tooth [4].

Diagnostic criteria of impacted primary teeth include the age of the patient, condition and occlusal status of the infraoccluded tooth, root resorption and adjacent alveolar bone levels [5]. The treatment plan of a submerged primary tooth depends on degree of abnormality, the present of its successor permanent teeth and time of onset. Distinguishing between lack of eruption due to some external interference and primary failure of eruption is important clinically, because the latter condition does not respond to the application of orthodontic force [6].

Submerged teeth have a high potential to cause malocclusion by inclination of proximal teeth or extrusion of antagonist teeth. In this case we could see impacted permanent premolar, inclination of adjacent tooth as well as extrusion of antagonist teeth [7,8]. Early tooth extraction for the treatment of submerged teeth is recommended [8].

On the contrary few authors state, if the cooperation of patients is obtained, observation is the best treatment since some submerged teeth exfoliate while the rest require extraction [9]. The preferable treatment option for the inferior impacted teeth is extraction only of the primary molars because the submerged deciduous mandibular second molars probably inhibited movement of the teeth germ of the second premolars, but due to severe infra occlusion and displaced position of the premolar away from its position of eruption and the resorption of adjacent molar tooth both the impacted second premolar and deciduous tooth were removed.

Figure 1: Missing permanent second premolar mesially tilted and restored permanent first molar.

Figure 2: impacted left deciduous second molar and permanent second premolar close to the base of mandible. resorption of adjacent molar tooth evident.
Summary
The management of a tooth eruption failure is difficult, not least because diagnosis of this condition relies principally upon exclusion, where all possible causative factors have been considered and eliminated. The possibility of a number of complications resulting from impaction of primary molars may indicate a need for early intervention by extracting the submerged/impacted tooth and the institution of a comprehensive orthodontic treatment. If this is not undertaken, periodical observation is mandatory to avoid complications associated with the same.

Reference