



ISSN Print: 2394-7489
ISSN Online: 2394-7497
IJADS 2016; 2(2): 14-15
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www.oraljournal.com
Received: 04-02-2016
Accepted: 05-03-2016

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The peripatetic mandibular second premolar

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Abstract

The intra-osseous migration of the non-erupting teeth is a rare natural condition of horizontal tooth movement and impaction. It occurs more commonly in the mandible and involves the second premolar or the canine. When the second premolars are affected they are always found distal to its normal position. The origins of the second premolar intra-osseous migration phenomenon is obscure and usually no treatment is recommended¹. They can be left in situ or can be extracted if they are associated with any pathology or for orthodontic treatment.

Keywords: Impaction/ unerupted, mandibular premolar, migration.

1. Introduction

An impacted tooth is one that is embedded in the alveolus as its eruption is prevented or locked in position by bone or the adjacent teeth. Mandibular second premolars rank third, after the third molars and maxillary permanent canines in the frequency of impaction^[3]. The prevalence of impacted premolars has been found to vary according to age. The overall prevalence in adults has been reported to be 0.5%. The range is 0.1% to 0.3% for maxillary premolars and 0.2% to 0.3% for mandibular premolars^[2]. Premolar impactions may be associated with over-retained or ankylosed primary molars, or due to local factors such as mesial drift of teeth arising from premature loss of primary molars, ectopic positioning of the developing premolar tooth buds or pathology such as inflammatory or dentigerous cysts or with syndromes such as cleidocranial dysostosis^[3].

Case Report

A 21 year old male reported to the department of orthodontics with the chief complaint of irregularly arranged teeth and wanted treatment for the same.

Past medical and dental history was not relevant.

Clinical examination revealed normal development of dentition except the retained primary left mandibular second molar and absence of mandibular left second premolar (Fig 1 and Fig2) and retained primary right maxillary canine (Fig3). Lower mid-line was shifted to the right by 2mm with severe crowding of the lower anterior teeth (Fig 3).



Fig 1

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Fig 2



Fig 3

OPG Findings

Radiographic findings show the presence of all the teeth except for 18 and 28, with retained 75 and 53 and horizontally migrated and impacted 35 present below the roots of 37. (Fig 4)



Fig 4

Discussion

In most of the studies ^[4, 5] early loss of the first molar has shown to significantly increases the possibility of intraosseous migration of second premolar, but in this case report the first molar is present and has erupted normally. Another cause is the abnormal angulations of the tooth buds of the second premolars, which could be one of the etiologic factors in this case. In the present case, the impacted second premolar has migrated to the mandibular angle similar to the cases reported in earlier studies ^[6]. Although many treatment options are available, the outcome depends on severity of impaction, the completion of root formation of the impacted premolar, the reduced level of dentoalveolar bone and the proximity of the impacted tooth to inferior alveolar canal. Hence early diagnosis can help in choosing the appropriate treatment option.

Conclusion

The primary origin for impacted premolars is most likely to be adventitious or idiopathic. Treatment options depends on the various factors mentioned above. Many a times it is left in-situ as done in this case which is reported.

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