

Unilateral Dual Distoangular Premolar Impaction: A Rare Case Report

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Abstract

Impacted premolars are often found accidentally or during through clinical examination of a patient. Prevalence of premolar impaction ranges from .2% to 0.76% depending upon the studies of various researchers. But unilateral dual distoangular premolar impaction is a rare finding.

Keywords: Premolar, Impaction, Dual.

Introduction

According to medical dictionary by Farlex dental impaction is regarded as the blocking of a tooth by a physical barrier, such as a neighboring tooth, Mandibular second premolars rank third after third permanent molars and maxillary permanent canines in frequency of impaction. The prevalence of mandibular premolar impaction is 0.2% to 0.3%¹⁻⁴.

The different causative factors for premolar impaction include arch length discrepancy, inadequate space, unwanted hindrance to tooth eruption, ectopic position of tooth germ, and the presence of any space occupying lesion i.e. odontomas or supernumerary teeth in the path of erupting tooth. Some systemic and genetic factors are also responsible for tooth impaction such as hypopituitarism, osteopetrosis, hypothyroidism, Down's syndrome and cleidocranial dysplasia⁵⁻⁷. In another study done by Saglam and Tuzum stated that the prevalence of mandibular premolars impaction was 0.76%⁷.

Case Report

A 17-year-old female, who was initially unaware of the left side impacted mandibular premolars, reported to Gurunanak Institute of Dental Sciences and Research with chief complaint of pain in the left side of the jaw (Figure-1). On clinical examination, a slight bulge and swelling were present in relation to the buccal aspect of first and second premolar region with over retained first and second deciduous molars of left side. On palpation, a little bulge was felt on the buccal aspect of the affected area. The occlusion was class I malocclusion, and oral hygiene was fair. Radiographic examination (OPG) revealed the presence of two impacted mandibular premolars, one lying distoangularly and another almost horizontally (Figure-2). Patient was willing to extract those two premolars along with deciduous molars. A surgical intervention was planned to extract two impacted premolars without any major complication.



Figure-1
Affected patient



Figure-2
Orthopantomogram of the same patient

An envelope flap was reflected from left lateral incisor to left first molar for better visualization of the surgical field. A full thickness flap was raised including the periosteum of the underlying bone. Using a round tungsten carbide bur and under irrigation, the crown was exposed more than the cemento-enamel junction according to need. Continuous irrigation was needed to preserve the vitality of the remaining surrounding mandibular boney structures. Then first premolar was extracted (Figure-3). Again second premolar was exposed and careful removal was performed preserving the buccal alveolar bone as much as we can (Figure-4). The wound was irrigated with 0.9% w/v normal saline and homeostasis was achieved, then surgical wound Closure was done using 3-0 black braided silk (Figure-5-6). The whole surgical procedure was carried out under local anesthesia with 2% lignocaine hydrochloride with 1:80000 adrenaline.



Figure-3
Surgically exposed first premolar



Figure-4
Surgically exposed second premolar



Figure-5
Extracted first & second premolars and retained deciduous teeth

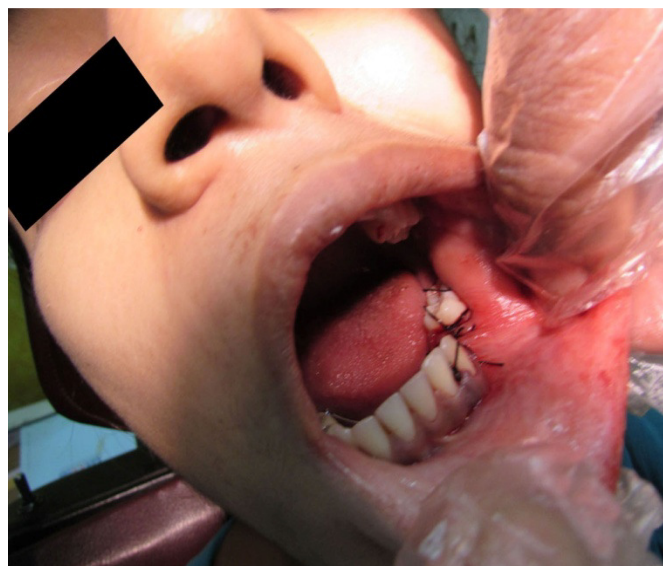


Figure-6
Repaired surgical field

Discussion

Treatment options for impacted premolar teeth range from observation, intervention and relocation to extraction or surgical extraction. The above described case is a rare entity. In this case the guardian as well as patient was not interested in any kind of conservative management. So surgical Intervention was the treatment of choice. The prevalence of premolar impaction is 0.2-0.3% but after extensive literature search we have not found any distoangular duel premolar impaction unilaterally in mandible. Orthodontic relocation may be another treatment of choice in this case.

Conclusion

Before doing any treatment planning or surgical intervention proper investigation and thorough examination is necessary to avoid any kind of complication.

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