

An Unusual Case of Impacted Maxillary Canine and Missing Bilateral Mandibular Lateral Incisors- A Case Report

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Abstract: An impacted tooth is the one that fails to erupt in the oral cavity within the expected age of its eruption. Usually such impacted teeth tend to be asymptomatic in most of the cases making the condition difficult to diagnose clinically. Radiographic examination is necessary to accurately localize the position of the impacted tooth. Maxillary canines are the second most common impacted teeth in the oral cavity after mandibular third molars. Such impaction should be managed with the help of coordinated multidisciplinary approach. In this article, one such case of impacted maxillary canine along with bilateral missing lateral incisors has been discussed.

1. Introduction:

Teeth that are partially or completely embedded in the bone or mucosa for more than 2 years after their anticipated physiological eruption time are said to be impacted ⁽¹⁾. Failure in eruption and subsequent impaction of permanent tooth is a common dental anomaly ⁽²⁾. Usually the reason for this failure is lack of space availability due to reducing arch length in evolution ⁽³⁾. This results in failure of eruption and impaction of any tooth within the maxilla or mandible. Third molars are the most common impacted teeth followed by canines ⁽⁴⁾. Longer roots, long path of eruption and developing tooth bud deep in the jaw are the reasons for Canine to be the second most impacted tooth ⁽⁵⁾. Genetic factors also play a vital role in impacted canines ⁽⁶⁾. Literature reports single and multiple impacted teeth with different rate of prevalence. Multiple impacted teeth are usually associated with syndromes viz. cleidocranial dysostosis, Yunis Varon syndrome, Gorlin-Sedano syndrome and Gardner's syndrome ^(7, 8).

Many impacted teeth are not identified as they remain asymptomatic. Injury of the surrounding tissue such as tooth, nerve canal, infection, etc. elicits pain. This pain is usually severe and radiating therefore demanding elective treatment. Abnormal sensation or paresthesia with deeply impacted lower third molar has also been reported ⁽⁹⁾. Occurrence of impacted teeth may affect the periodontal condition of the adjacent tooth and may lead to caries ^(10, 11).

This article aims to present a case of unilateral impacted maxillary canine causing displacement of adjacent tooth thus altering the aesthetics.

2. Case report:-

A 17 year old male Indian patient reported to the Department of Oral and Maxillofacial Surgery with the chief complaint of pain in the upper right maxillary region since 2 days. Patient gave history of pain in the same region 1 month back which subsided by analgesic over the counter.

In intraoral findings, there was distal tipping of maxillary right lateral incisor with diastema and spacing between the right maxillary lateral and central incisor. Lateral incisor was tender on vertical percussion. Over retained deciduous maxillary right canine and left deciduous second molar were present. Mandibular lateral incisors were also missing. An Orthopantomogram (OPG) was advised to evaluate the ectopic presence of missing teeth. On radiographic examination, maxillary right canine was horizontally impacted with the roots of maxillary right lateral incisor (Fig.1). Also there was erupting maxillary left second premolar. But the missing mandibular lateral incisors were not found in any unusual position. Orthodontic opinion for impacted right maxillary canine and erupting left maxillary second premolar was obtained.

As per the referral opinion, the treatment was planned. Surgical removal of impacted right maxillary canine and follow ups for left maxillary erupting second molar was suggested.



Figure.1 Orthopantomogram

3. Discussion:

The normal eruption process of deciduous and permanent teeth to their functional position into the oral cavity occurs in a chronological framework. But rarely, the tooth fails to erupt due to biomechanical impediments, dento-alveolar trauma, crowding, malpositioning of adjacent teeth, thickened mucosa, insufficient maxillofacial skeletal development, eruption disturbances and indirect effects of cysts or neoplasms⁽⁰⁷⁾. Defect in some genes may also be responsible for abnormalities in the eruption⁽¹²⁾. Usually these unerupted teeth tend to deviate aberrantly losing their potential to erupt and are referred to as impacted teeth. According to epidemiological studies, 25 to 50 % human populations have the presence of impacted teeth in the oral cavity⁽¹³⁾

Nodine⁽¹⁴⁾ reported a sexual predisposition, with impaction occurring more commonly in females. He also reported the increased frequency of impaction of mandibular left canine to mandibular right canine. Howard⁽¹⁵⁾ stated that canines that lie between 25° and 30° in the midsagittal plane are ectopically impacted, but they do not cross the mandibular midline. He also stated that an overlap of the canines is seen in the radiographs if the angulation is 30° to 50°. When this angulation exceeds 50°, it results in transmigration of the canine.

Management of impacted canine is dependent on many factors like position and age. Observation, surgical intervention, relocation with the help of orthodontic treatment and extraction are the treatment options available to manage impacted canines⁽¹⁶⁾. Age of the patient, position of the teeth, number of impacted

teeth and any concomitant metabolic, genetic and syndromic abnormalities should be considered during the treatment plan ⁽¹²⁾. Coordinated multidisciplinary management is critical for patients with multiple impactions ⁽¹⁷⁾.

Missing teeth in dental arch, after completion of the chronological order of eruption of all teeth should be thoroughly investigated. In this case, missing canine with the presence of tipping and spacing in the maxillary right anterior teeth was suggestive of some anomaly which was confirmed by radiograph.

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