



## Cursed Canines - The Fate of Unerupted Permanent Canine Teeth

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### Abstract

*There is a well-said old age folklore saying regarding permanent Canines referring ‘lucky’ teeth. However, review of dental anomalies literature shows various types of permanent canine’s pathological conditions like ‘canine transmigration,’ ‘kissing canines,’ ‘canine impaction,’ ‘canine transposition’ and ‘ectopic canine eruption.’ In the above-mentioned dental phenomenon either single or two canines are affected. In this article, all four permanent canines including maxillary and mandibular canine teeth were pathologically sacrificed and found associated with different dental phenomenon representing a rarest dental entity not reported till date in the dental literature.*

**Keywords:** Dental anomalies, Kissing Canines, Migration, Permanent canine, Transmigration, Transposition.

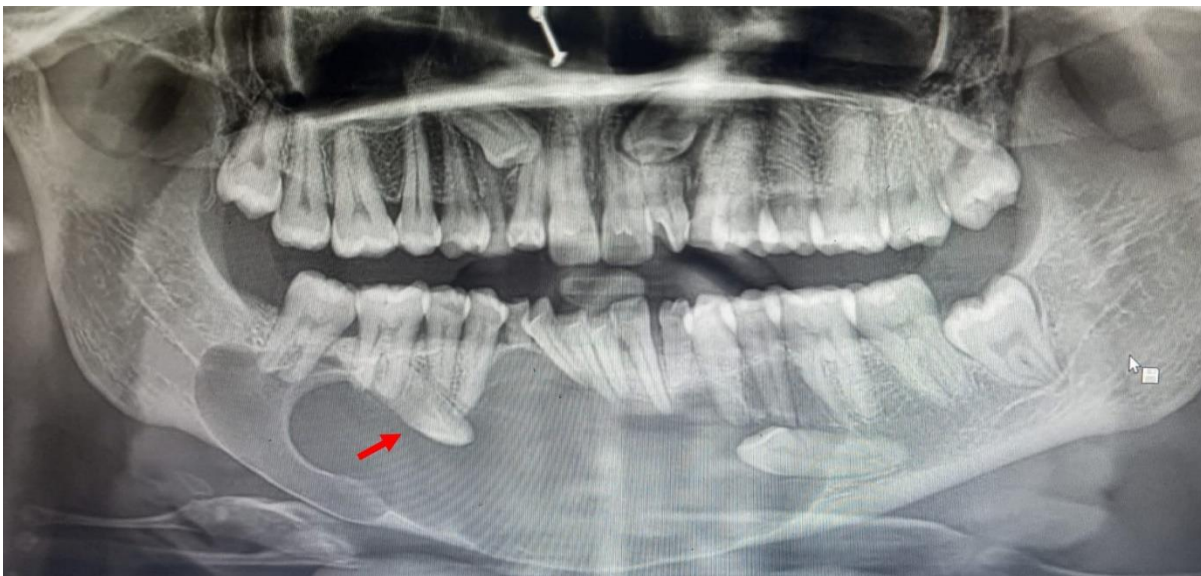
### Introduction

Permanent canines are the longest and corner teeth in the oral cavity and considered as ‘lucky’ teeth for humans. Various types of dental anomalies and conditions are encountered associated with permanent canines such as canine transmigration, canine transposition, canine impaction, ectopic canine eruption, canine migration and canine agenesis [1-13]. These conditions occur as a result of disturbances occurring during development of teeth and eruption procedure. A recent Indian study estimated the prevalence of different canine anomalies as mentioned above in context of Indian population using 1593 orthopantomograph radiographs collected as a retrospective data. Out of 1593 patients evaluated, the prevalence of canine impaction observed was 1.38% (maxillary canine impaction – 0.93% and mandibular canine impaction – 0.37%), canine transmigration was of 0.12%, ectopic canine was 5.5%, canine transposition was 0.18% and canine agenesis was 0.06% [14]. When a dental anomaly occurred, it involved either single or two permanent canine teeth. However, dental anomalies and pathology involving all four permanent canine teeth is not reported in the dental literature till date according to best of author’s knowledge. Therefore, the aim of this paper is to present all four permanent canine teeth which were cursed meaning sacrificed with different dental anomalies, dental phenomenon and dental pathologic conditions. Though they are referred as corner teeth, strong teeth, help in establishing beauty to the face, establishing occlusion and lucky teeth, but in this case, they are totally cursed by the nature.

### Case details

Age/ Gender	Chief Complaint	Clinical Features	Radiographic Features (Figure 1)	Treatment Provided
22 years Female	Presence of retained primary teeth	Retained primary canines in both maxillary and mandibular arch.  Clinical absence of all four	Impacted Permanent canines (mesio- angular impaction) in the maxillary arch. The crowns of both right and left canines were facing each other and placed above the roots of central and lateral incisors (they are termed as ‘Mirror Image Canines’ or ‘Kissing Canines.’)  Mandibular right Canine was impacted,	Surgical excision of the cyst along with removal of all four permanent canines.

		<p>permanent canines in both maxillary and mandibular arch.</p>	<p>migrated and inverted associated with huge cystic lesion.</p> <p>Mandibular left canine was impacted, migrated and associated with a huge cyst.</p> <p>Mammoth radiolucent lesion in the mandible due to joining two cysts leading to expansion of lower border of the mandible and thinning of the cortical plate.</p> <p>Retained four primary canine teeth in the maxillary and mandibular arch.</p>	
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**Figure 1:** Orthopantomograph showing ‘mirror-image canines’ in the maxillary arch. In the mandible, two dentigerous cysts are joined together at the midline associated with impacted, inverted and migrated right canine (red arrow) and horizontally impacted left canine. All four retained primary canines are also evident.

**Discussion**

‘Mirror image canines’ are also termed as ‘Transmigration of bilateral canines’ or ‘Kissing canines’ was first described by Idris Faig Qaradaghi [15] and defined as ‘the migration of both impacted canines at the same rate and on the same horizontal axis parallel to each other and meeting each other at the midline.’ In this report, both maxillary right and left canines were mesially angulated with crowns facing each other and found in close scenario resembling ‘mirror image canines.’ Literature shows only countable number of case publication about this canine variation. One case publication was contributed by India [13] and another from Oman [15]. In Indian case report, along with mirror image canines, other associated dental anomalies found were bilateral congenital agenesis of mandibular first premolars, bilateral hypertaurodontism associated with mandibular second molars and root dilaceration.

‘Inversion of Tooth’ is a rare dental phenomenon other than impaction where a tooth is mispositioned and reversed in the upside-down position [16-18]. The most commonly affected teeth by this rarity are incisors, supernumerary teeth, premolars and canines [16]. There are reports showing inversion of canines in the maxillary arch and rarely seen in the mandibular arch. In the present case, the mandibular right canine was inverted due to the pressure of expanding pathologic lesion associated with it. The canine not only inverted but also migrated towards the distal side of the mandible and located below the roots of the mandibular first molar with crown facing downwards within the cystic lesion.

The ‘Dental Migration’ is another dental eruptive disorder characterized by the movement of an unerupted tooth to an area far from its regular place of tooth development [19]. It is also described as ‘horizontal movement of an unerupted teeth and occurs only in the mandible.’ The teeth most commonly migrate within the dental alveolar bone are the permanent mandibular canines, premolars and lateral incisors [19]. However, there is a report showing migration of the

supernumerary supplemental premolar towards the ramus of the mandible and is usually called as ‘paramolar wandering’[19]. This condition is reported more in the females than males [19]. Migration of canines and premolars towards condyle, body and ramus of the mandible is also reported [19]. In this case, on the left side, the impacted canine was horizontally impacted and migrated towards distal side and found below the roots of left first molar with crown facing mesially towards midline.

Bilateral dentigerous cysts development is another uncommon condition rarely reported in the literature [20]. If it occurs it is reported with syndromes. Multiple dentigerous cysts are also reported [21]. In the present case, two dentigerous cysts were developed involving the permanent canines both on right and left side of the mandible. The two bilateral cysts in asymptomatic way gradually developed to a huge size and both joined together in the dental midline. Root resorption of teeth associated with the cyst was not evident. All primary canines were retained even at the age of 22 years having complete length of the roots with no evidence of root resorption. There are reports showing occurrence of bilateral dentigerous cyst involving either third molars or maxillary molars. But there are no reports showing bilateral dentigerous cyst formation involving impacted two canine teeth. Therefore, publication of present case adds more evidence to the existing literature and also represents a uniqueness of the case ever reported so far. The present report also highlights the importance of regular dental checkup for the evaluation of different dental conditions and a thorough regular radiographic evaluation to detect hidden truth of dental pathology or conditions occurring in patients.

## Conclusion

Knowledge of permanent canine teeth anomalies and their association with pathologic conditions occurring in human population is important in diagnosing these anomalies at an early age in order to treat early and to avoid complications. As prevalence of different canine anomalies varies from one population to another population, future prospective studies are highly essential to obtain data and add more evidence to the existing literature.

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