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Case Report

Dilated Odontoma Peg Lateral "Vampire Look": A Rare Case Report

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Abstract

Tooth variation correlated to aesthetic, functional and positional factors affects the adjacent teeth originating multiple problems, is a rare developmental anomaly. The maxillary permanent canine is the tooth, frequently involved, which is often a positional change occur with the first premolar followed by transposition between the maxillary permanent canine and maxillary lateral incisor and looks like a cone. True peg lateral incisor is a term reserved for the partially developed adult permanent tooth that erupts, and substitution take place, after the baby tooth has been lost. An incisal mesiodistal width of the tooth crown is shorter than the cervical width of peg-shaped lateral incisor. Present case, tooth transposition involving laterals of maxillary arch which is rarest of condition. The aim of this case report is to present a rare case of non-syndromic, bilateral dilated odontoma affecting a microdontic permanent lateral incisor in a 25 year old female patient with peg lateral teeth with its clinical features, Bilateral presence of dilated odontoma is not a common occurrence, although a single tooth involvement in each case has been reported in the literature.

Keywords: *Incisors; Maxilla; Microdontia; Peg-Shaped Teeth*

Introduction

Dental anomalies can be associated with numerous genetic and environmental factors. During prenatal and postnatal period, originating developmental anomalies affects tooth dimensions, position, and number, the most influence on these defects frequently occurs in the prenatal period [1]. Most common condition is microdontia which affects the maxillary lateral incisor is called as "peg lateral." Localized involvement of mandibular lateral incisor is very rare entity in itself [2]. Numerous developmental variations which are most commonly associated with maxillary lateral incisors either unilaterally or bilaterally are microdontia, hypodontia, dens invaginatus, dens evaginatus and Palatal talon's cusp of a permanent maxillary lateral incisor [3].

It was observed that transposition of maxillary teeth occurs nearby one of three hundred orthodontic patients and that transposition between the canine and first premolar appears mostly (70%) in maxillary dentition, followed by one between canine and lateral incisor (20%). Unilateral transpositions are found frequently than bilateral transpositions and show left side dominance [4].

The prevalence values for male subjects were significantly lower than for females (risk ratio, 1.35; 95% CI, 1.13 - 1.61).

The prevalence of unilateral and bilateral peg-laterals was found approximately same (0.8%; 95% CI, 0.6 - 1.0) and (0.8%; 95% CI, 0.5 - 1.1) respectively.

Unilateral peg-laterals, right-side ones (0.2%; 95% CI, 0.1 - 0.3) were half as common as left-side ones (0.4%; 95% CI, 0.2 - 0.6).

Very few case studies have stated peg-shaped central or lateral incisors in maxilla. Peg shaped incisors are commonly observed affecting the maxillary lateral incisors. The prevalence reported fluctuates from 0.8% to 8.4% of the universal population [5]. Peg shaped mandibular incisors are connected with syndromes [6].

Syndromes associated with mandibular peg shaped incisors [5]:

1. William's syndrome
2. Gorlin-Chaudhr-Moss syndrome
3. Ullrich-Turner syndrome
4. Chromosome 13 syndrome
5. Rothmund- Thomson syndrome
6. Hallermann-Streiff syndrome
7. Orofacial digital syndrome (type 3)
8. Oculomandibulofacial syndrome
9. Trichorhinophalangeal syndrome.
10. Type1 branchiooculofacial syndrome

Case Report

A female patient aged 25 years reported to the outpatient department of Periodontology in Subharti dental college and Hospital for routine checkup. Consent form was taken duly signed by her for research and development purpose. The patient never had any kind of trauma or extractions. No significant medical or family history. When clinical examination was done it was observed that patient had normal skin, nail, and hair. No abnormalities were seen on extra- and intra-oral examinations and patent never had any history related to tongue thrusting or lip biting. On intra-oral examination, the overjet and overbite was normal. The patient did not have any other abnormality in oral cavity.

The most frequently involved tooth is the maxillary permanent canine, which along with the first premolar is often transposed, after the transposition between the maxillary permanent canine and maxillary lateral incisor is over. Scaling and root planning had been done for the patient and was referred to the department of conservative and endodontics for asthetic concern. The department suggested composite buildup i.r.t 12 and 22 as the main complaint of the patient was regarding microdontia. No orthodontic treatment required as patient having aligned teeth.

Figure 1: *Peg-shaped maxillary left and right lateral incisors.*

Figure 2: *Intra-oral photograph showing palatal view of maxillary left peg laterals.*

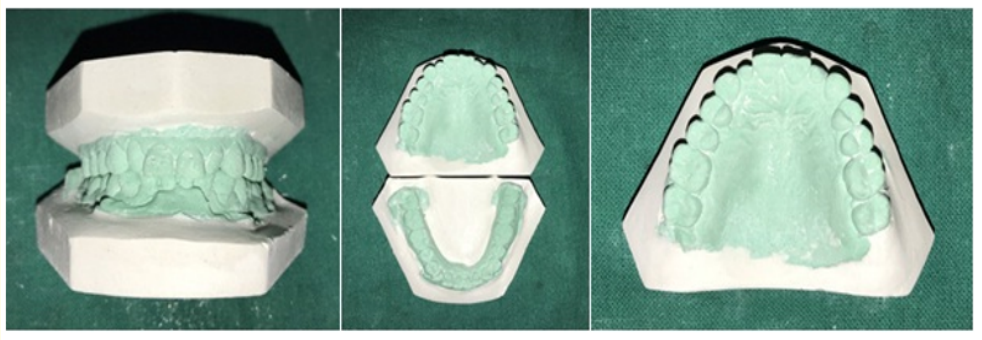

Figure 3: *Diagnostic cast of peg laterals showing facial view and palatal view.*

Discussion

As defined by Koch., *et al* [7] tooth size is abnormal, when dimensions deviates two standard deviations from average. Such size abnormalities are either manifested as macrodontia or microdontia. Teeth which are smaller than normal are known as microdontia i.e. outside the usual limits of variation. The maternal intrauterine influences affects the deciduous dentition more whereas the permanent teeth seem to be more affected by the environment [8]. If the maxillary lateral incisors are peg-shaped, it can be considered a mild form of hypodontia phenotype which can be relation to other developmental anomalies. But this relationship can hardly be seen in literature. Garib., *et al*. [9] Stated that maxillary lateral incisor microdontia was normally related with agenesis.

According to teeth involved, Peck and Peck classified five different types of tooth transposition noticed in maxillary jaw.

1. Canine-first premolar (Mx.C.P1)
2. Canine-Lateral incisor (Mx.C.I2)
3. Canine to first molar position (Mx.C.M1)
4. Lateral incisor-Central incisor (Mx.I2.I1)
5. Canine to central incisor position (Mx.C.I1) [10]

The aspect of peg shaped tooth treatment is aesthetic and orthodontic corrections [11]:

1. No treatment, for patient not concerned.
2. Orthodontic treatment to alignment the teeth in the arch.
3. Direct composite bonding onto peg laterals.
4. Indirect composite placement.
5. Bonded crowns
6. Porcelain bonded to metal crowns (Bello 1997).
7. Crown lengthening surgery to get one of the best gingival heights then direct bonding.
8. Extraction of teeth and implant placement.
9. Combinations of treatment in different sequences.

Our outcome results were close to the finding of authors, reported that the right side peg-shaped lateral incisors were less common than the left side ones [12]. It was reported that the prevalence of peg-shaped maxillary permanent lateral incisors range 1.8% to 2.3%, whereas the prevalence of missing permanent mandibular lateral incisors is less frequent (0.1%) [13]. The prevalence of peg-shaped lateral incisors for male patients (1.87%) was lesser than for female patients (2.35%), but no statistically significant difference was present between genders. When evaluation of different patterns of peg-shaped maxillary lateral incisors done, it was noticed that the female patients had highly statistically significant more peg-shaped maxillary left lateral incisor (0.97%) compared to the male patients (0.11%) [14]. According to Kazanci., *et al* [15]. Females shows more peg shaped laterals. The reported differences in the peg-shaped maxillary lateral incisors might be due to functional relationship of independent variable factors, i.e variations in the sample size, regional locations, age range of the subjects, distribution of genders, evaluation methods and racial differences.

Conclusion

Early diagnosis of transpositions helps in correction with minimizing risk, happening of injuries to the contiguous tissues. Even though the prevalence of unilateral and bilateral, lateral incisors was similar, the left side was double as common as the right side. Patients with unilateral peg-shaped maxillary permanent lateral incisors should have a 55% chance of having lateral incisor hypodontia on the opposite side. Dentists should be aware of this abnormality prior to the treatment for probable complications in future.

Conflicts of Interest

There are no conflicts of interest.

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