ORTA ANADOLU TÜRK POPULASYONUNDA PEG-SHAPED LATERAL PREVALANSI: BIR SAHA ÇALIŞMASI

PREVALANCE OF PEG-SHAPED LATERALS AMONG CENTRAL ANATOLIAN TURKISH POPULATION: A FIELD STUDY

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Özet

Bu çalışmanın amacı 8 yaş grubu türk popülasyonunda peg- sahaped lateral diş prevalansının araştırılmasıdır.

Toplamda 2348 çocuk (1222 erkek ve 1126 kız) peg-shaped lateral diş varlığı açısından muayene edildi. Tüm çalışmalar Diş Hastalıkları Ve Tedavisi Bölümü asistanları gözetiminde 30 diş hekimliği öğrencisi tarafından standart ayna ve sond kullanılarak yapılmıştır.

5'i erkek ve 11 kız toplamda 16 çocukta (%0,68) peg-shaped lateral gözlemlenmiştir. Erkek ve kız oranı1:2 dir. 7 çocukta peg-shaped lateral diş bilateral olarak gözlemlenmiş, 9 çocukta ise tek taraflı olarak gözlemlenmiştir.

Türk Anadolu popülasyonunda peg-shaped lateral oranı %0,68 olarak bulunmuştur. Her iki cinsiyettede görülme sıklıkları yakınlık göstermiştir.

Anahtar Kelimeler: Dental anomaliler, prevalans, peg-shaped lateraller.

Abstract

The objectives of the present study were to investigate the prevalence of peg-shaped laterals among 8 year Turkish population.

A total of 2348 cildren (1222 boys, 1126 girls) were assesed by intra-oralexamination for the presence of peg-shaped laterals. All examinations were performed by -30 - calibrated dental students under direct supervision of two research asistant in departmant of operative and preventive dentistry by using a standard mouth mirror and dental probe.

Peg-shaped laterals were detected in 16 subjects (0,68%), of which 5 were males and 11 were females with a approximately 1:2 male female ratio. Peg-shaped laterals showed bilateral distribution in 7 subjects and unilaterally in 9 subjects.

The frequency of peg-shaped lateral was 0,68% in a Turkish Anatolian population. Peg-shaped had similar frequencies in both sexes.

Key words: Dental anomaliies, prevalance, peg-shaped laterals.

Introduction

In generalized microdontia all teeth in the dentition appear smaller than normal. Teeth may actually be measurably smaller than normal, as in pituitary dwarfism, or they may be relatively small in compari-son with a large mandible and maxilla. In focal, or localized, microdontia a single tooth is smaller than normal. The shape of these microdonts is also often altered with the reduced size. This phenomenon is most commonly seen with maxillary lateral incisors in which the tooth crown appears cone or peg-shaped, prompting the designation peg lateral.[1]

Peg lateral teeth, or peg lateral incisors, are terms used to describe a condition where the lateral incisors are undersized and appear smaller than normal.[2] An autosomal-dominant inheritance pattern has been associated with this condition.[3, 4] The study of the frequency of the reduction phenomena of the maxillary lateral incisor is an interesting object especially from the viewpoint of anthropology and racial studies. Regarding these fields, this subject has been dealt with in detail by Pedersen[5] in his monography on the Eskimo dentition. The investigations by Schulz[6] and Montagu[7] , with

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their extensive list of references, also deserve attention. Peg-shaped lateral incisors occur in approximately 2% to 5% of the population, with women have as lightly higher frequency than men.[7, 8] More than 78 million people live in Turkey, nearly three-quarters of whom live in towns and cities. The population is increasing by 1.5% each year, according to the 2011 census.The majority of the Turkish population are of Turkish ethnicity. Other major ethnic groups include the Kurds, Circassians, Zazas, Roma, Arabs and the three officially-recognized minorities (per the Treaty of Lausanne) of Greeks, Armenians and Jews. The largest non-Turkic ethnicity is the Kurds, a distinct ethnic group traditionally concentrated in the southeast of the country. The Syriacs are a smaller non-Turkic ethnic group which are mostly found in southeastern Turkey, and stand for the largest Christian denomination in the country.[9] It is known that between 16th and 17th centuries, Turkish tribes and communities who were coming from East of Turkey are settled in Anatolia, especially in Central Anatolia. One of these tribes which is named as "Oguz-Oguzhan" clan is settled in "Kirikkal'a" (oldest name of the city) which is near to Ankara mentioned in the history archives of Turkey.[10]

The aim of the present study was to examine prevalance of peg-shaped laterals in 9 year old children in the city of Kırıkkale, Central Anatolian Turkish children.

Material and Methods

The study was conducted in a board-school in Kırıkkale city. This city is located in capital city of Turkey in Middle Anatolia**.** All second grade children in 37 primary school of Kirikkale- city- center were included in the study all examinations procedure were carried out in each class of the schools between march to may 2008. A total of 2348 cildren (1222 boys, 1126 girls) were examinded, aged 9. All examinations were performed by -30 - calibrated dental students under direct supervision of two research asistant in departmant of operative and preventive dentistry by using mirror and probe, under clear natural light, in a lying position. Prior to this practice, a calibration exercise was conducted among the two research asistant in the clinic, using clinical photographs of 15 patients. The validity of using clinical photographs to study peg-shaped laterals has been confirmed by other authors previously.[11]

Results

A total of 2348 cildren (1222 boys, 1126 girls) with ages comprised 9 years old were clinically examined. In this present study peg-shaped laterals was observed in 16 (11 girls, 5 boys) out of 2348 subjects, with a frequency of 0,68 %. The distribution of the peg-shaped laterals according to the gender of the subjects is shown in table 1. Of the16 subjects had peg-shaped laterals 10 (8 left, 2 right) of them shows unilaterally and 6 involving bilaterally (Table 1).

Gender	n	Peg-shaped laterals	Frequency	P value	Total (%)
Male	1222	5	0,41	0.095	16(0,68%)
Female	1126	11	0,97		

Table 1: Distribution of the peg-shaped laterals according to the gender

Discussion

A peg-shaped tooth was defined by Grahnen[12] as any reduction in mesiodistal crown diameter in a gingivo-incisal direction. The frequency distribution of the peg-shaped maxillary lateral incisors reported is variable in different studies, it ranged from 0.5% to 3.4%.[7, 8] These differences may be due to lack of definite criteria for describing this tooth or it may be a true racial difference.[6]

Upper lateral incsiors are more variable in size and morphology than any other tooth, and have the second highest frequency of congenital absence after third molars.[13] Maxillary lateral incisors are often missing, mis-shaped, or small. Particular shapes that recur have been identified (eg, pegand barrel), and systems have been established so that dental anthropologists can nominally categorize mis shaped teeth.[6] There are some other authors who have presented high percentages for the peg-shaped lateral in literatüre; Thomsen[20] 5.0 for Tristanites, Hrdlicka[15] 8.4 for Chinese males and 4.0 Chinese females. These forms have

been called by different names — pyramidal, conical, peg-shaped, abnormal, degenerated or diminished in size, apparently depending on the subjective estimation of the author.

Kırıkkale is the capital of the Kırıkkale Province in the Central Anatolia region of Turkey. It is located 80 km east of Ankara. According to the 2000 census, the population of the province is 280,834, of which 192,705 live in the city of Kırıkkale. The town of Kırıkkale is located on the Ankara-Kayseri railway near the Kızıl River in central Turkey. Formerly a village, it owes its rapid rise in population mainly to the establishment of steel mills in the 1950s. Kırıkkale is surrounded by Çorum, Yozgat and Kırşehir to the east, Kırşehir to the South, Ankara to the west, and Çankırı to the North and it allowed immigration from these cities during to industrilization. So, Kırıkkale demographic show the mosaic of the Central Anatolia and consists mostly Turkish population

Slight differences in the occurrence of peg-shaped laterals were observed between our study and previous epidemiological studies. These conflicting results can be explained primarily by racial difference and sampling technique. These could also be explained by local environmental factors and nutrition.[21]

In present study peg-shaped laterals was observed in 16 out of 2348 subjects, with a frequency of 0,68 % in the urban region of the Kırıkkale city. The result showing the prevalence of subjects with peg-shaped lateral is lower than previously reported studies.[14-18, 22-24] These variations are mostly the result of racial and ethnic differences between populations.

Our study showed peg-shaped lateral to have a prevalence of 0.68%, it is lower but not far from the prevalence reported by Işık (1%).[24] However, this observation differs from the findings of Gelgör et al., who showed in their st udy a very high prevalence of peg-shaped maxillary lateral incisors (7.7%).[25] This could be because the examined students in the study of Gelgör et al. were mostly with using the pretreatment orthopantomographs and study models of 1086 (375 boys and 711 girls) adolescents in other words all of them were orthodontic patients. Other investigators in other populations (United State, German, Iceland, and Swedish populations) had also reported a lower incidence of peg-shaped maxillary lateral incisors with prevalence that varies from 0.3 to 1.3 %.[26-30]

The overall frequency of individuals with at least one peg lateral was about 0,68 % . Our estimate in Turkish children i s consistent with th at estimated by Meskin and Gorlin on a large number of Midwestern college students found 0.88% frequency.[6] Another study by Backman and Wahlin [19], the incidence of peg-shaped incisors was found to be 0.8% in 739 Swedish children. Both of the studies show consistency with our results.

Only a few reports have noted a definite predilection for sidedness in the case of the unilateral peg-shaped lateral incisor.[23, 31, 32] A major finding in this study was the discovery that peg-shaped lateral incisors are more common on the left side of the arch. This confirms a similar finding by Meskin and Gorlin,[6] who also found a higher prevalence of peg-shaped lateral incisors and disclosed a 2 to 1 ratio for left sided peg-shaped incisors. Morever Hrdlickal and Brekhus et al. found a slight tendency for left-sided occurrence of peg-shaped laterals.[31, 32]

When our data was arranged according to sex, both agenesis and peg-shaping of the permanent maxillary lateral incisors were found to be more frequent in females than in males. These findings are in accord with those of others.[16, 26, 28]

Finally, the frequency of peg-shaped lateral was 0,68% in a Turkish Anatolian population with no gender difference and shows bilateral disturbition

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