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PREVALENCE OF DISTO MOLAR AMONG THE PATIENTS VISITING A PRIVATE DENTAL COLLEGE

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Abstract
Introduction : The supernumerary teeth that occur distally to a molar tooth described as “distomolar” teeth. Supernumerary teeth were found more often in the maxilla than in the mandible. They may erupt normally or remain impacted and appear inverted. Distomolar teeth are generally seen smaller than second or third molars and most of them are impacted The aim of this study is to determine the frequency and location of distomolar teeth among the patients visiting private dental college.
Material and Methods: A retrospective observational study was conducted on 1000 patients panoramic images, with the documentation of demographic data, the presence of distomolar teeth, their number and location .
Results: The presence of distomolars was observed in 21 radio-graphs (12 males and 9 females) giving a total prevalence of 2.1% within these 350 panoramic radiographs. Out of these 21 radiographs, there were a total number of 29 distomolars. Within these 29 distomolars, 14 were observed in the maxillary right quadrant , nine in the maxillary left quadrant and three each in the mandibular right and left quadrants.
Conclusion: The prevalence of distomolars in our study was 2.1%. Distomolars were predominantly seen in males in the third decade of life. The most frequent location was the maxillary right quadrant.

Keywords: Age ;Disto molar; Gender ; Location ; Novel method; Prevalence

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INTRODUCTION:

The presence of an excessive number of teeth in relation to the normal dental formula is known as supernumerary tooth (ST) or hyperdontia (20 in the deciduous dentition and 32 in the permanent dentition). 1 ST can appear in both dentitions, however they are more common in the permanent dentition. [1]In the permanent dentition, the prevalence of ST has been observed to range from 1.5 to 3.5 percent, while in the deciduous dentition, the frequency has been recorded to range from 0.3 to 0.6 percent.[2]Supernumeraries can be found in any part of the arch and are classed based on where they appear [3].Distomolars, or fourth molars, is the ST distal to the third molar, and paramolars, or buccal or lingual to the molars, is the ST buccal or lingual to the molars The mesiodens, maxillary distomolars, maxillary paramolars, mandibular premolars, maxillary lateral incisors, mandibular distomolars, and maxillary premolars are the most prevalent ST given in order of frequency. ST can be single or multiple, unilateral or bilateral, and can affect either the mandible or the maxilla, or both. [4] ST are classed as supplemental teeth (tooth that copies the anatomy of anterior or posterior teeth) or rudimentary teeth based on their morphology (dysmorphic,molariform or conoid). The majority of

supernumerary teeth, on the other hand, have a morphology that differs from the regular appearance of the teeth. [5]

Although the cause of extra teeth is unknown, there are a few theories that have been offered. The phylogenetic theory as a regress to anthropoids with more teeth, an abnormal reaction to a local traumatic episode, autonomic recessive inheritance or linked to theX-chromosome, environmental factors, dichotomy of the tooth germ, and the theory of hyperactivity of the dental lamina are among the most widely accepted postulates.[6] 7ST is linked to a variety of abnormalities in nearby teeth, including tooth over retention or delayed eruption, ectopic eruption, tooth malposition, tooth displacement, cysts formed from the follicle of ST, root resorption due to compression on adjacent roots, and other anomalies. [7]8 For the diagnosis of an unruptured ST, radiographs are the most reliable and definitive approach. Panoramic, periapical, and occlusal radiographs are the most widely utilised radiographs.[8] 9

Our team has extensive knowledge and research experience that has translate into high quality publications [9–28]

The aim of the study was to analyse the incidence of distomolars in patients visiting a private dental college

MATERIALS AND METHODS:

The study was conducted on randomly selected 350 panoramic radiographs from patients visiting saveetha dental college. Each patient's specific medical record was acquired, and each case file was thoroughly examined. Age,sex, and the location (maxilla or mandible), were all noted from the radiographs. Data was entered into Microsoft Excel 2007 and analysed in SPSS V20. Associations between categorical variables were determined using Chi-square test. $P < 0.05$ was considered statistically significant.

RESULTS:

In the analysis of 350 orthopantomogram, 21 radiographs were discovered to have distomolars (Fig. 1), indicating a prevalence of 2.1 percent of the population. There were 12 males (57.14 percent) and 9 females (42.85 percent) in the 21 radiographs. The patients with distomolars were on average 30.2 years old (range 16 to 46 years). The third decade showed 42.85% (n = 9) of the distomolars, followed by the fourth decade with 28.57 percent (n = 6) of the distomolars (Graph 1).

The 21 radiographs revealed a total of 29 distomolars. 23 (79.31 percent) of the 29 distomolars were found in the maxilla, whereas 6 (17.24 percent) were found in the mandible. 14 (48.27%) of the 23 distomolars in the maxilla were in the right quadrant, whereas nine (31.03%) were in the left quadrant. Distomolars in the mandible were distributed evenly, with three in each quadrant (10.34 percent) (Graph 2). Radiographs with one distomolar were seen 66.67 percent of the time, two distomolars were seen 28.57 percent of the time, and more than two distomolars were seen 4.76 percent of the time.

DISCUSSION:

According to the literature, the prevalence of distomolars varies depending on the population studied by different writers, ranging from 1% recorded by Stafne to 2% reported by Luten. [1,29]. However, distomolars were found in 2.1 percent of the population in our study.

ST is more common in the first three decades of life than in older age groups, according to Salcido-Garcia et al. [30] The mean patient age in our series was 30.5 years, which corresponded to the third decade of life, which was similar to the findings published by these authors. This observation could be attributed to the fact that a substantial percentage of these teeth are discovered by chance during molar extractions in individuals in this age range.

Regarding gender distribution we coincide with most authors, with males more commonly affected than females.Several researchers like Timocin et al have observed a sexual dimorphism of this pathology with higher incidence in males than in females in their study [31]. Goaz and White said that it occurred twice as often in males [32]. Also Yousuf in his study stated a male-female ratio of 9:2 and Liu claims it to be 3:1 in the occurrence of ST.[33,34] In accordance with these observations we too observed a ratio of 5:4 in this series.

According to Grimani's research, distomolars are discovered more commonly in the maxilla than in the mandible, with the maxilla accounting for the majority of distomolars (79%) in his study [35]. The results in our series were comparable to those previously described, with a higher incidence of distomolars in the maxilla.

CONCLUSION:

Because there are few radiographic surveys on distomolars, we decided to conduct a study to determine the prevalence and features of distomolars. In this series, distomolars were found in 2.1 percent of the cases. Males were the ones who were most affected. The average age of the victims was 30.2 years. The right quadrant of the maxilla was the most common position. One distomolar was found in a higher percentage of radiographs.

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CONFLICT OF INTEREST:
All the authors declare that there was no conflict of interest in the present study.

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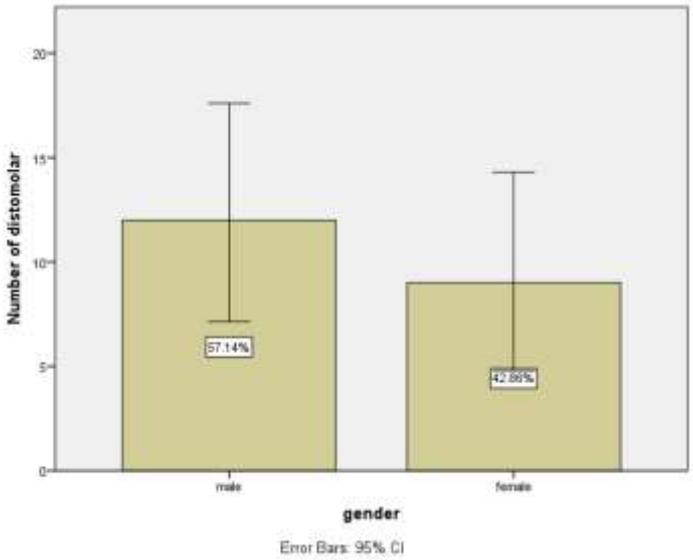
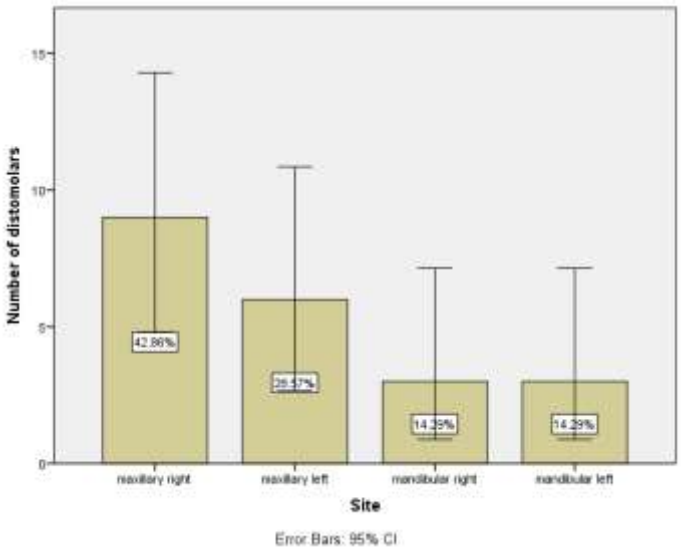
Figure 1: Gender prevalence of disto molars



The bar graph represents the prevalence of gender The Horizontal axis represents the gender of the patients and the Vertical axis represents the number of distomolars.

Figure 2: Prevalence of disto molars in different sites



The bar graph represents the prevalence of distomolar in different sites. The Horizontal axis represents the site and the Vertical axis represents the number of distomolars.