

Prevalence of Supernumerary Teeth in a Nigerian Population

ABSTRACT

Introduction

Supernumerary teeth are those which appear in addition to the regular number of teeth. The aim of this study was to determine the prevalence of supernumerary teeth in the Nigerian population.

Materials and Methods

The multi-stage sampling technique was employed in this cross sectional study. Intra – oral examination of 1004 students of Delta State University, Abraka was conducted between May and June 2015. The oral examination involved 579 males and 425 females. The data were analyzed using the Statistical Package for the Social Sciences (SPSS 20). The difference in the prevalence of supranumerary teeth between the two gender was determined with the chi-square test ($p < 0.05$ was considered significant).

Results

One hundred and twenty- seven supernumerary teeth were recorded in this study (prevalence of supernumerary teeth was 12.70%). Supernumerary teeth were located mostly in the mandibular region (84.00%), compared to the maxillary region and commonly around the incisor teeth. It was observed that 58 supranumerary teeth were between 2 central incisors, 64 in the lateral incisor region and 5 in the premolar and molar region. The ratio of males to females with supernumeraries was found to be 1.4:1 ($p > 0.05$).

Conclusion

This study showed a higher prevalence of supernumeraries than previously reported. The prevalence of supernumerary teeth was more in males than their female counterparts.

Key words: Teeth, supernumerary, prevalence, Nigerian

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INTRODUCTION

A supernumerary tooth is an additional tooth in the normal series, erupted or unerupted, and may resemble or is unlike the other teeth of the group to which it belongs.¹ Supernumerary teeth can occur in almost all the regions of the dental arch. However, most are found in the anterior maxilla, either as mesiodens or supernumerary lateral incisors.² A study revealed the ratio of men to women with supernumeraries to be 2.2:1 or 2:1.³ Another study found the distribution to be 1.3:1.⁴

The aim of this study was to determine the prevalence of supernumerary teeth in the Nigerian population. This study will provide baseline data for forensic anthropologists and dental practitioners.

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Subjects and Methods:

The study area is the Abraka campus of the Delta State University in Nigeria. The multi-stage sampling technique was employed in the study.

Intra – oral examination of 1004 students of Delta State University, Abraka was done between May to June, 2015 in this cross sectional study. The oral examination involved 579 males and 425 females. Subjects’ hard oral tissues were examined in order to observe the supernumerary teeth. The subjects with history or clinical presentation of pathological conditions, trauma or fracture of the jaw were excluded from the study.

The data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS 20). The difference in the prevalence of supranumerary teeth between gender was assessed with chi-square test ($p < 0.05$ significance level). Approval for this study was obtained from the Anatomy Department Research and Ethics Committee of the Delta State University, Abraka. Consent was obtained from each participant as only voluntary subjects were allowed to participate⁵.

RESULTS

Table 1: The prevalence of supernumerary teeth among students of Delta State University, Abraka.

Location of supernumerary tooth		Prevalence (Percentage)	
		Male	Female
Between central Incisors	Maxilla	4 (0.7%)	2(0.5%)
	Mandible	34(5.9%)	18(4.2%)
Lateral incisor region	Maxilla	8(1.4%)	8(1.9%)
	Mandible	33(5.7%)	15(3.5%)
Premolar region	Maxilla	3(0.5%)	-
	Mandible	2(0.3%)	-
Molar region	Maxilla	-	-
	Mandible	-	-

There were 579 males (57.84%) and 425 females (42.16%), with an age range of 18- 30 years and a mean age of 24 years. One hundred and twenty-

seven supernumerary teeth were seen in this study. Thus the prevalence of supernumerary teeth was 12.7%. Supernumerary tooth was most commonly (84%) seen in the mandibular region. It was observed that 58 supranumerary teeth were between 2 central incisors, 64 in the lateral incisor region and 5 in the premolar and molar region. All the supernumerary teeth were erupted. The statistical analysis using chi – square showed no significant gender difference as the P value was > 0.05 .

DISCUSSION

The prevalence of (supernumerary teeth) hyperdontia is reported to range between 1-3% in permanent dentition and is considerably rarer in the primary dentition. The aetiology of supernumerary teeth is unknown, and several theories have been suggested.

Clinical complications are not uncommon in patients with supernumerary teeth. Tooth displacement and failure of eruption are the most frequently seen complications.⁶ The reported prevalence of supernumerary teeth (12.7%) in the present study differs from the value reported by another researcher in Saudi Arabia. A study of 2,393 Saudi Arabian children documented the prevalence of supernumerary tooth to be 0.5%.⁷A total of 127 subjects had supernumerary tooth in the present study. Bäckman and Wahlin reported 14 cases with one supernumerary tooth in a study in the Caucasian population.⁸

In the present study the sex ratio was 1.4:1 in favor of males and this concurs with the ratio (1.28:1) seen by Bereket *et al.*, in 2015.⁹ The ratio differs from the 2:1 ratio between males and females reported in Caucasians.¹⁰ The most frequent location of supernumerary teeth in this study is in the mandibular region, and this does not conform with the report of De Oliveira Gomes *et al.*,¹¹ and other researchers^{12,13}, who stated that the maxilla is well-known to be the most frequent site.

The present study concurs with some studies that reported that supernumerary teeth were located more in the mandibular region.^{14, 15, 16}The presence of multiple supernumerary teeth is usually associated with problems of displacement, rotation, ectopic eruption of the adjacent teeth, resorption of the adjacent teeth and even the formation of primordial cysts.¹⁷ An unexpected finding in his study was clearly indicated that the

subjects had full complement of permanent dentition present in normal occlusion, with none of the associated potential problems. The recommended solution is intra-oral radiographic review of the participants with supernumerary teeth.

CONCLUSION

This study showed a higher prevalence of supernumeraries than previously reported. Supernumerary teeth are more common among males than females and more frequent in the mandible region and around the incisors in the permanent dentition.

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