

**PREVALENCE OF SUPERNUMERARY TEETH IN PEDIATRIC DENTAL PATIENTS IN
NORTH INDIAN POPULATION: A CROSS SECTIONAL STUDY**Anju Singh, BDS (H), MDS¹ and Dr. Konark, BDS (H), MDS*²¹Senior Resident, Department of Pedodontics and Preventive Dentistry, Government Patna Dental College and Hospital, Patna, Bihar, India.²Senior Lecturer, Department of Conservative Dentistry and Endodontics, Government Patna Dental College and Hospital, Patna, Bihar, India.***Corresponding Author: Dr. Konark**

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ABSTRACT

Aim: The aim of this study was to evaluate the prevalence of supernumerary teeth in pediatric dental patients in north Indian population. **Methods:** The study population comprised 5,709 non-syndromic patients aged 4-15 years who applied for routine check-ups at the in Department of Pedodontics and Preventive Dentistry. The population included children in deciduous, mixed and permanent dentition. Both clinical and radiographic examinations were conducted. Demographic variables genders as well as number of supernumeraries and their relation with eruption were recorded for all patients with supernumerary teeth. **Results:** Out of the 5,709 patients examined, supernumerary teeth were detected in 57 patients (1%). Out of these, 35 (61.40%) were male and 22 (38.60%) were female (male-to-female ratio: 1.59:1). A total of 63 supernumerary teeth were detected, 60 (95.24%) of which were permanent teeth and 3 (4.76%) of which were deciduous teeth. **Conclusion:** The prevalence of supernumerary teeth was found to be 1%.

KEYWORDS: Supernumerary Teeth; Mesiodens; Primary Teeth.**INTRODUCTION**

Supernumerary teeth are the result of a rare alteration in odontogenesis and are defined as teeth present in excess of the number found in the normal dental formula.^[1] Supernumerary teeth may be encountered by the general dental practitioner as a chance finding on a radiograph or as the cause of an impacted central incisor. They may also be found intraorally following spontaneous eruption. Both the primary and permanent dentitions may be affected by variations in the number, size, and form of the teeth, as well as the structure of the dental hard tissues. These variations may be caused by local or systemically acting environmental factors and genetically determined, or possibly from a combination of both two factors. Dental anomalies classified as numerical, form, size, structural, and positional anomalies, and supernumerary teeth have an important place in numerical anomalies. Approximately 80% of all supernumerary teeth are found in the anterior medial region of the maxilla.^[2] The most common supernumerary tooth which appears in the maxillary midline is called a mesiodens. Mesiodens can occur either individually or as multiples known as Mesiodens which may be unilateral or bilateral. Supernumerary primary teeth are apparently less common than supernumerary permanent teeth. There are many numbers of theories about the development of the

etiology of supernumerary teeth even though it's not fully explained. Both clinical and radiographic examination is essential for detecting supernumerary teeth although recently computerized tomography has been used as a complimentary diagnostic test. Treatment depends on their type, position and possible complications, identified both clinically and radiographically. Although surgical extraction is the most common treatment, another option is to reposition supernumerary teeth in the dental arch.^[3]



Fig. A: Supernumerary Teeth.

MATERIAL AND METHODS

The study was conducted after obtaining approval from ethical committee. Panoramic and or occlusal radiographs have been taken from the children when necessary. Both clinical and radiographic examinations were conducted. The study population comprised 5,709 non-syndromic patients aged 4-15 years who applied for routine check-ups at the in Department of Pedodontics and preventive Dentistry. As a routine procedure informed consent from all the patients that are examined were achieved from the parents explaining that the finding from clinical and radiographic (if necessary) findings would be further explored. Radiographs taken from patients were routine examination radiographs, if there were a suspicion of supernumerary teeth from the clinical examination radiographs were taken to examine this situation otherwise the finding of supernumerary teeth from routine radiographs were random. Patients with reduced mouth opening and with severe illness were excluded from this study. The population included

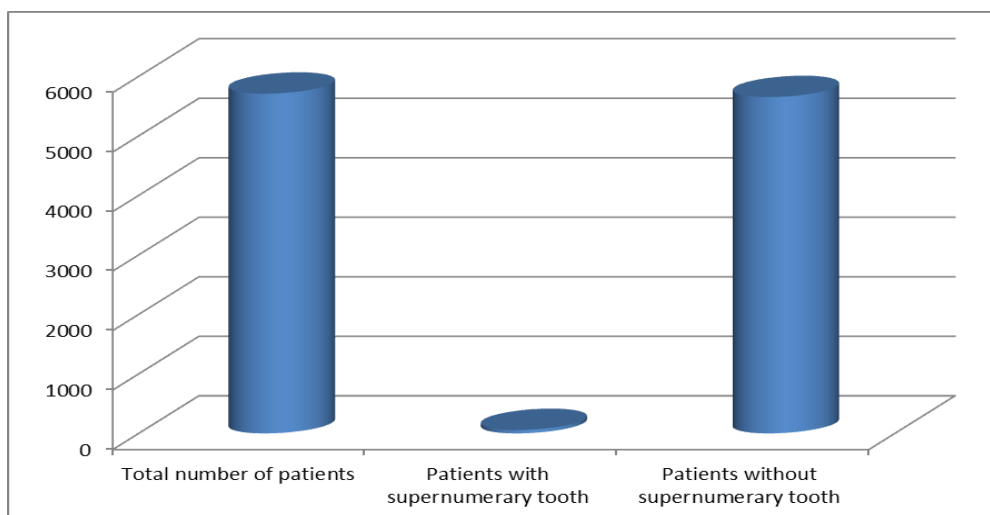
children in deciduous, mixed and permanent dentition. Both clinical and radiographic examinations were conducted. Demographic variables genders as well as number of supernumeraries and their relation with eruption were recorded for all patients with supernumerary teeth. Data was stored in Microsoft Excel 2010 for analysis.

RESULTS

Out of the 5,709 patients examined, supernumerary teeth were detected in 57 patients (1%) (TABLE NO 1, GRAPH NO 1). Out of these, 35 (61.40%) were male and 22 (38.60%) were female (male-to-female ratio: 1.59:1) (TABLE NO 2, GRAPH NO 2). A total of 63 supernumerary teeth were detected, 60 (95.24%) of which were permanent teeth and 3 (4.76%) of which were deciduous teeth (TABLE NO 3, GRAPH NO 3). Out of 63 supernumerary teeth 10 (15.87%) teeth were erupted and 53 (84.13%) teeth were unerupted (TABLE NO 4, GRAPH NO 4).

Table No 1: Patients with Supernumerary Tooth and Without Supernumerary Tooth.

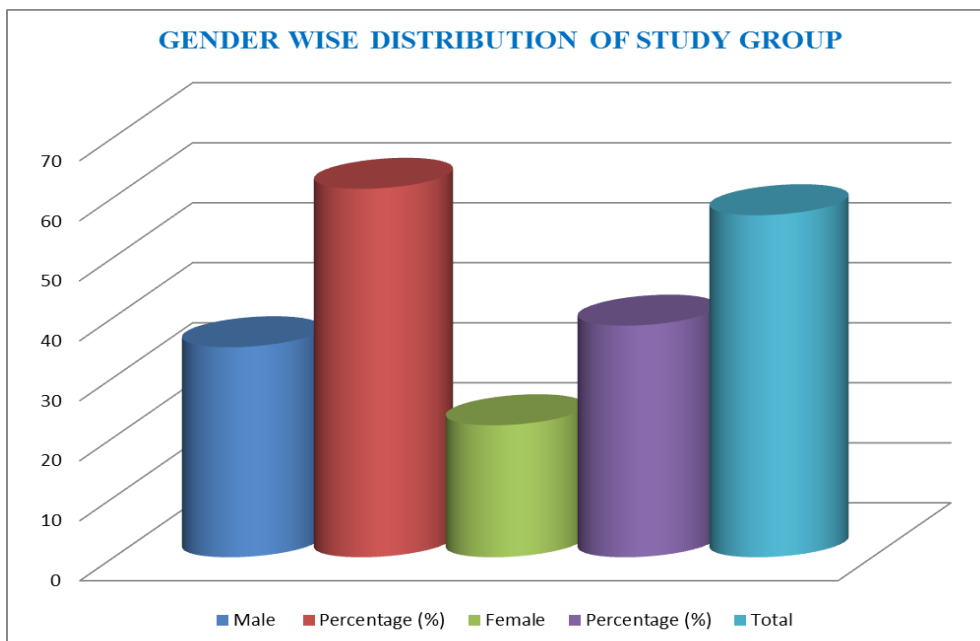
Total number of patients	Patients with supernumerary tooth	Percentage (%)	Patients without supernumerary tooth	Percentage (%)
5,709	57	1.0	5,652	99



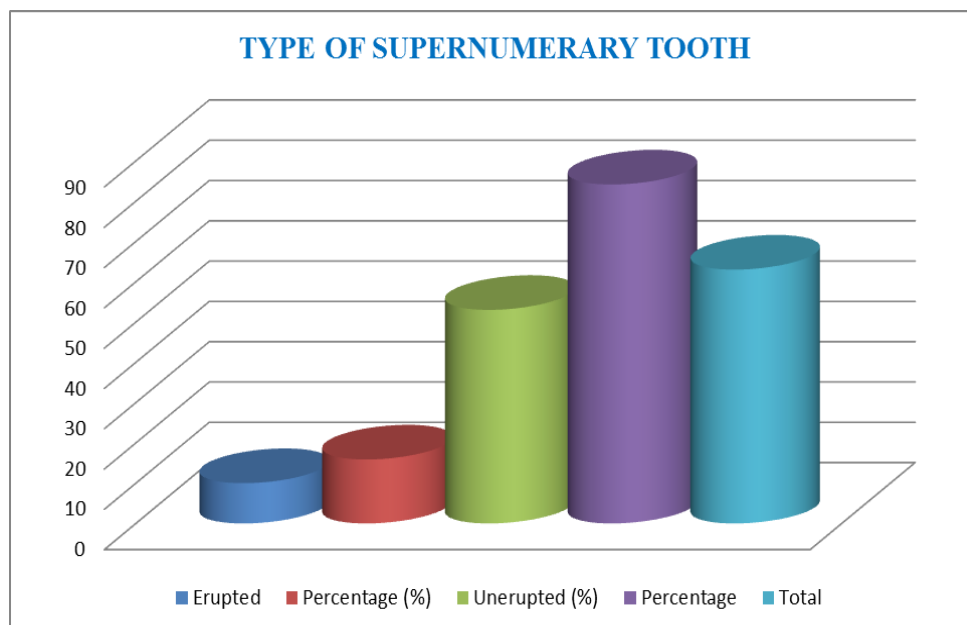
Graph Number 1: Patients with Supernumerary Tooth and Without Supernumerary Tooth.

Table Number 2: Gender Wise Distribution of Study Group.

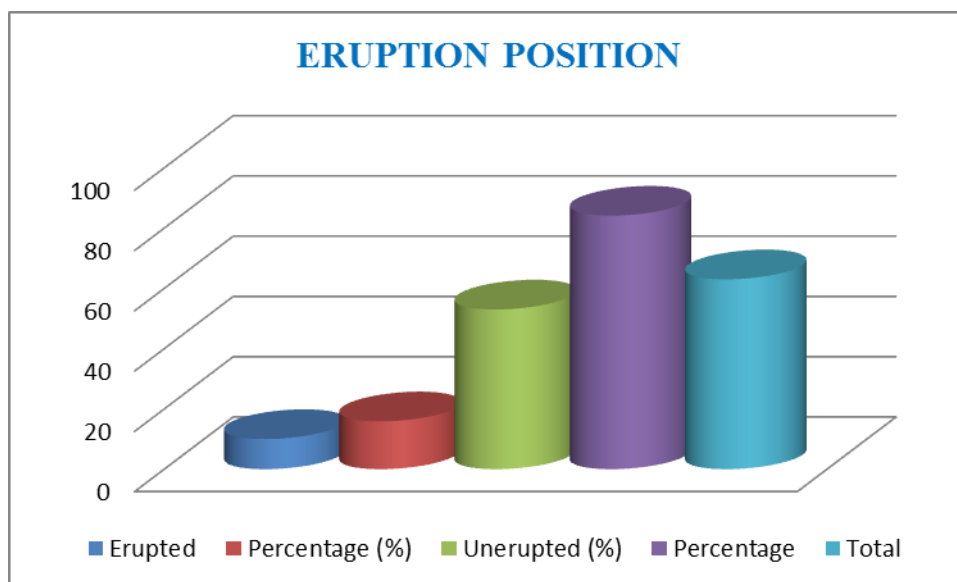
Male	Percentage (%)	Female	Percentage (%)	Total
35	61.40	22	38.60	57

**Graph Number 2: Gender Wise Distribution of Study Group.****Table Number 3: Type of Supernumerary Tooth.**

Permanent	Percentage (%)	Deciduous	Percentage (%)	Total
60	95.24	3	4.76	63

**Graph Number 3: Type of Supernumerary Tooth.****Table Number 4: Eruption Position.**

Erupted	Percentage (%)	Unerupted (%)	Percentage	Total
10	15.87	53	84.13	63



Graph number 4: Eruption Position.

DISCUSSION

Supernumerary teeth may be asymptomatic and diagnosed during routine radiographic examinations, or they may cause complications such as impaction; delayed or ectopic eruption of adjacent teeth; crowding or disruption of tooth spacing; and the formation of follicular cysts or other disruptions of the oronasal environment.^[4] Recent studies have suggested environmental factors as well as a dichotomy of the tooth bud as other possible etiological factors.^[5] The prevalence of supernumerary teeth in the present study found to be (1%). This finding is in line with Caucasian population, where supernumerary teeth have been reported to occur at a rate of from 0.1%-3.8%.^[2] The present study found supernumerary teeth to be more prevalent in male than in female patients, with a ratio of 1.59:1. The present study showed that supernumerary teeth were rarely seen in deciduous dentition (4.76%). The prevalence of supernumerary primary teeth in our study is higher when compared to the results of previous studies that report the prevalence of supernumerary teeth in the primary dentition between 0.3percent-1.9percent.^[6]

CONCLUSION

The prevalence of primary supernumerary teeth found to be higher when compared to other studies. The dentist should be aware of the possibility for a supernumerary tooth hence should know the frequency in the population. As a pediatric dentist it is necessary to evaluate the complete clinical and radiographical findings at early ages in order to prevent or reduce orthodontic problems that could occur if the supernumerary teeth are not noticed.

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