



## An analysis of Prevalence of Supernumerary Teeth in Population of Bhagalpur District of Bihar

Vishal<sup>1\*</sup>, Sinha DK<sup>2</sup>, Kumar C<sup>3</sup>

1. Oral & Maxillofacial Surgeon, Department of Dentistry, Jawaharlal Nehru Medical College & Hospital, Bhagalpur, Bihar 812001, India
2. Prosthodontics & Consultant Implantologist, Private Practitioner, Dental Lifeline, Ratu road Ranchi 834005, India
3. Oral Physician, Private Practitioner at Dr Kumar Oral & Maxillofacial clinic, Dhanbad 828109, India

**Corresponding author:** Dr Vishal, Oral & Maxillofacial Surgeon, Department of Dentistry, Jawaharlal Nehru Medical College & Hospital, Bhagalpur, Bihar 812001, India, email: drvishalkumarsinha@gmail.com

### Publication History

Received: 19 March 2017

Accepted: 25 April 2017

Published: May-June 2017

### Citation


Vishal, Sinha DK, Kumar C. An analysis of Prevalence of Supernumerary Teeth in Population of Bhagalpur District of Bihar. *Medical Science*, 2017, 21(85), 150-154

### Publication License



This work is licensed under a Creative Commons Attribution 4.0 International License.

### General Note

 Article is recommended to print as color digital version in recycled paper.

### ABSTRACT

**Aim:** The Aim of the study was to determine the prevalence of Supernumerary teeth in population of Bhagalpur district of Bihar.

**Method and Study:** Patients which came for routine Dental checkup and treatment in JLNMC&H during October 2016 to mid-April 2017 were included in the study. Supernumerary teeth were detected by clinical examination and also by radiographs.

**Result:** In total 4110 patients who were screened in the Period, prevalence of supernumerary teeth was 1.3% of the Population, Frequency of occurrence of Supernumerary tooth were mesiodens, followed by premolars, paramolars and distomolars respectively. Malalignment and dental decay were most common manifestation due to the presence of supernumerary teeth.

**Conclusion:** Prevalence of Supernumerary teeth is 1.3% which is comparable with other studies. Extraction of these teeth was advised as soon as they were diagnosed.

**Keywords:** Supernumerary teeth, Hyperdontia, Dental Anomalies, Mesiodens, Premolars

**Abbreviations:** IOPA – Intra Oral Periapical, OPG – Orthopantomogram

## 1. INTRODUCTION

Supernumerary teeth are developmental abnormality in which extra tooth/teeth are present in the dental arch which may or may not resemble the teeth of the group to which it belongs. The condition is also known as hyperdontia. It has been suggested that they may develop from the extra tooth bud arising from the dental lamina near the permanent tooth bud, or possibly from splitting of the permanent tooth bud itself<sup>1</sup>. Supernumerary teeth can also be hereditary in some cases<sup>2</sup>.

The most common dental problem arises with presence of supernumerary teeth is mal-alignment followed by food impaction and caries of adjacent teeth. Types of supernumerary teeth includes mesiodens, distomolar, maxillary paramolar, premolars and maxillary lateral incisor. They may be either single or paired, erupted or unerupted.

Although there have been various studies done regarding the incidence and prevalence of hyperdontia in general population in various part of world, but very less literature is available regarding prevalence and distribution site of Supernumerary teeth in India and particularly in eastern part of India.

The purpose of this study was to determine the frequency and distribution of supernumerary teeth in the population of Bhagalpur and adjacent area and co-relate them with other studies.

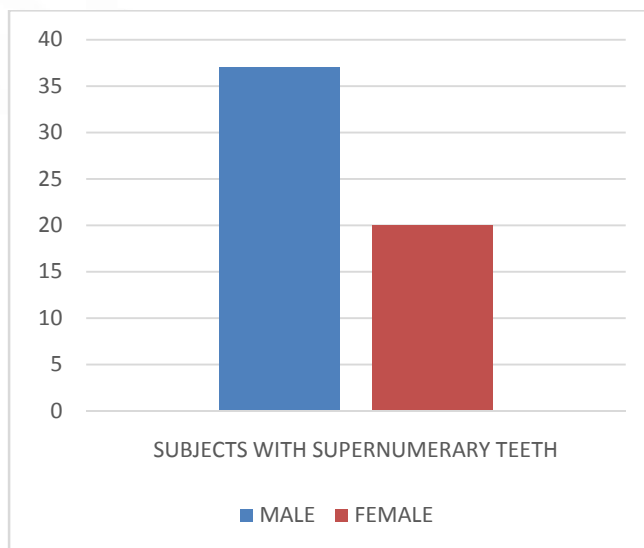
## 2. METHOD AND STUDY

Subjects who came for routine dental checkup and treatment at Dental OPD at Jawaharlal Nehru Medical College & Hospital, Bhagalpur were included in the study.

Patients who were completely edentulous, previously underwent orthodontic treatment, Odontoma or the syndromic patients were excluded from the study<sup>3</sup>.

Patients were screened by intra oral examination as shown in figure 1 and radiographs such as IOPA, Occlusal View and OPG as shown in figure 2 & 3 whenever it was required. Any patient in which supernumerary tooth/teeth was manifested we recorded the demographic variables which included age and sex. Location and type of Supernumerary teeth and any pathologic condition associated with it like malocclusion, decay or the food impaction was also documented.

Data collected was summarized, and was statically analyzed and compared with other studies.



**Chart 1**

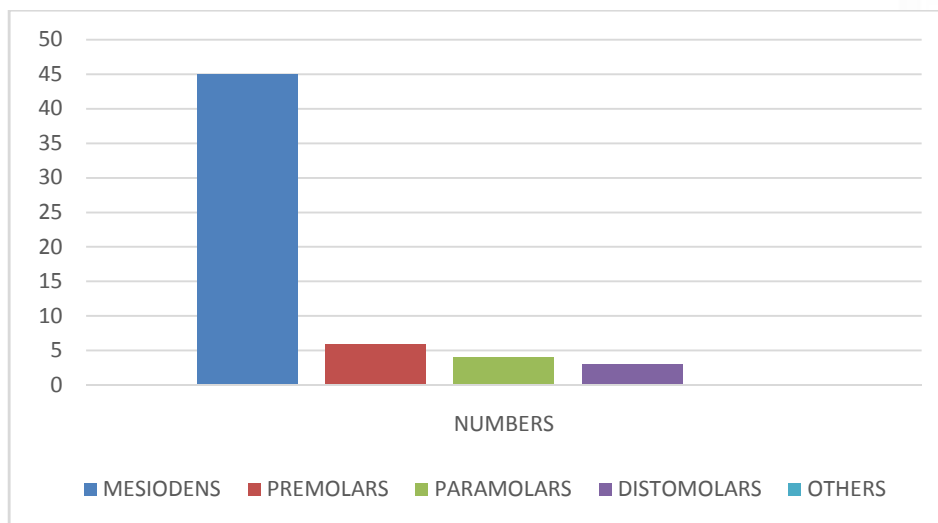
Sexual Comparison of Patients having hyperdontia

### 3. RESULTS

Out of Total 4110 patients screened in the Dental OPD in JLNMC&H Bhagalpur, total 61 supernumerary teeth in 57 patients were found. Majority of them were male (37) compared to the female (20) shown in Chart 1. Mean age of the patients were 19.4 years.

Supernumerary teeth were found most common in maxilla particularly premaxillary site compared to mandible, ratio was 52:9. Most common supernumerary teeth detected was mesiodens(45), followed by premolars(6) paramolar (4) and distomolar (3) shown in Chart 2. A patient had an extra lower incisor, a conical shape tooth distal to right upper lateral incisor and an ectopic erupted upper left canine each.

Chief Complaint of majority of the patients came was for cosmetic reasons and malalignment of the teeth (49), other complain included decay and food impaction (8)



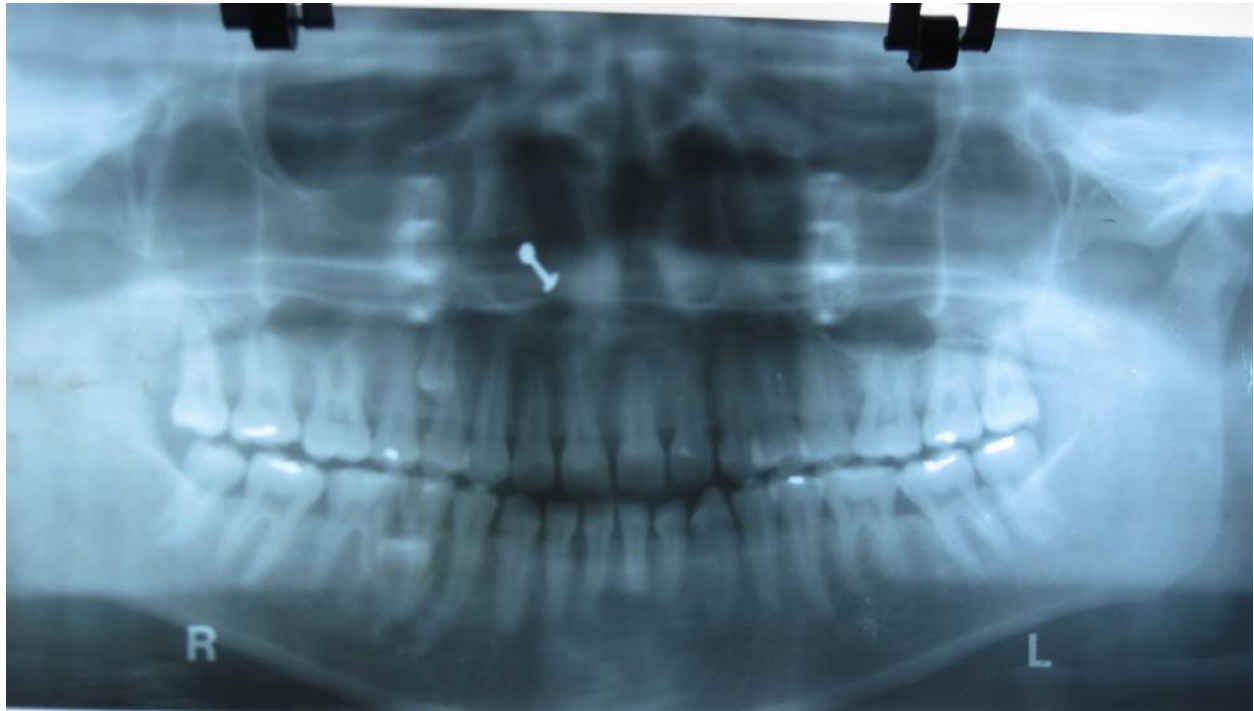
**Chart 2**

Comparison of types of Supernumerary teeth



**Figure 1**

Paired Mesiodens in a 19-year-old male



**Figure 2**

An OPG of 30 year old male revealing one supernumerary upper premolar and one lower premolar



**Figure 3**

A case of unerupted mesiodens with a retained deciduous central incisor

#### 4. DISCUSSION

1.3% of the population in the study had supernumerary teeth, Brook et al found that incidence of supernumerary teeth in permanent and primary dentition was 2.1% and 0.8% respectively<sup>4</sup>.

In our study males were more often affected in comparison to female which was also in accordance to the sexual dimorphism of Mitchell L and Luten JR<sup>5,6</sup>.

Most of the supernumerary teeth were singular, but around 10% of subjects had multiple supernumerary teeth, and with exaptation of one case they were exclusively present in the premaxillary region.

Mesiodens was the most common hyperdontic tooth which was in agreement with other studies<sup>7,8,9</sup>, but we found that there were more subjects with extra-premolar (10%) and paramolar (6.5%) compared to distomolar (4.9%) which was different from the study of Shafne in which distomolar were 28% of the total supernumerary teeth<sup>5</sup>. Such variation may be due to different location of the study.

Presence of mesiodens generally resulted in malalignment of other maxillary teeth and causes esthetic problem, in those cases extraction followed by orthodontic treatment are advised whereas the presence of extra-teeth in posterior region of were function causes. Presence of extra premolar or the paramolar resulted in the food impaction and decay of other adjacent teeth, extraction of supernumerary teeth was generally followed by restoration or RCT of adjacent teeth.

#### 5. CONCLUSION

Prevalence of hyperdontia is 1.3% of the total patients screened in Jawaharlal Nehru Medical College & Hospital and is comparable to other previous studies. Although Supernumerary teeth are not itself a pathology, but sequence of events due to presence of supernumerary teeth results in oral and dental problems such as malocclusion and dental caries. So it is always advised to remove the supernumerary teeth as possible.

#### DISCLOSURE STATEMENT

There is no special financial support for this research work from the funding agency.

#### REFERENCE

1. *A textbook of Oral Pathology*, Shafers 4<sup>th</sup> edition, Page 47-50
2. *Textbook of Oral Medicine*, AG Ghom, 119-121
3. LD Rajab & MAM Hamdan. Supernumerary teeth: review of the literature and a survey of 152 cases, *International journal of Paediatric dentistry*, 2002, 12, 244-254
4. Brook AH. Dental anomalies of number, form and size: their prevalence in British school children, *J Int Assoc Dent Child*, 1974, 5, 37-53.
5. Mitchell L. Supernumerary teeth, *Dental Update*, 1989, 16, 65-69
6. Luten JR. The prevalence of supernumerary teeth in primary and mixed dentitions, *ASDC Journal of Dentistry for Children*, 1967, 34, 346-353.
7. EC Stafne. Supernumerary teeth, *Dent Cosmos*: 1932, 74:653,
8. MN Mahboob et al. Prevalence rate of supernumerary teeth among non-syndromic South Indian population: An analysis, *Journal of Pharmacy and Bio-allied Science*, August 2012, Vol 4, s373-s376
9. SK Gupta et al. Prevalence and distribution of selected developmental dental anomalies in an Indian population, *Journal of Oral Sciences*, 2011, Vol 53, No.2, 231-238