

Supernumerary molars: A short review & our experience of four rare cases

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Abstract

In the oral cavity, when teeth present are in excess of normal dental formula of deciduous or permanent dentition, these teeth are known as “supernumerary teeth”. Supernumerary teeth are most predominantly present in the maxillary arch as compared to the mandibular arch. These teeth are most commonly found in the incisal region as compared to the molar region.

Supernumerary teeth present in the molar region are also known as “supernumerary molars”. Depending on their location, supernumerary molars are known as “paramolars” or “distomolars”.

This article presents a short review about supernumerary molars as well as reports four rare cases of supernumerary molars we come across in our institute.

Keywords: Distomolars, Hyperdontia, Paramolars, Supernumerary molars, Supernumerary teeth.

Introduction

An odontostomatologic anomaly of supernumerary teeth is also known as “Hyperdontia”. When any tooth substance or tooth exceeds the normal configuration of 20 deciduous dentition and 32 permanent dentition, it is known as “hyperdontia”. Supernumerary teeth may be present unilaterally or bilaterally. There may be single or multiple supernumerary teeth and there can be erupted or impacted supernumerary teeth.¹ Supernumerary teeth are most predominantly present in the maxillary arch as compared to the mandibular arch. These teeth are most commonly found in the incisal region as compared to the molar region.⁴

In permanent dentition, occurrence of supernumerary teeth varies from 0.1% to 3.8% whereas in deciduous dentition, it is 0.3% to 0.6%. In case of permanent teeth, supernumerary teeth shows almost double prevalence in males as compared to females. But, in deciduous dentition, sexual dimorphism is not seen. Supernumerary teeth are most commonly seen in Asian population. Multiple supernumerary teeth are seen very rarely and are present in less than 1% of all cases. In approximately 76 % to 86 % of cases, single supernumerary tooth is seen whereas, in approximately 12% to 23% of cases, two supernumerary teeth are seen.¹ Multiple hyperdontia is mostly seen in individuals suffering from developmental disorders or syndromes. Multiple hyperdontia may be seen in developmental disorders like Incontinentia Pigmenti, Gardner’s syndrome, Ellis-Van Crevell Syndrome, Cleidocranial dysostosis, Ehlers-Danlos syndrome and Fabry- Anderson’s syndrome.¹ Supernumerary molars occurring in the molar region can be classified into “paramolars” or “distomolars”.⁴

Very few cases of supernumerary molars have been reported in the literature and very rarely bilateral supernumerary molars are seen.³ In the present article, we are briefly reviewing “supernumerary molars” as well as we are reporting four very rare cases of supernumerary molars, which we come across.

Our Experience

Case Report 1

A 30 years old female patient visited our institute with the chief complaints of pain in the lower right and left back teeth region of jaw. On clinical examination, bilateral impacted third molars were observed in that same region as well as pericoronitis was present.

On radiographic examination, bilateral mandibular distomolars were seen which is rare phenomenon. Fig. 1 shows its orthopantomogram which clearly reveals presence of bilateral mandibular distomolars. Right side distomolar was horizontally impacted whereas left side distomolar was mesioangularly impacted. This is very rare phenomenon.

As patient was suffering from pain, she was advised undergo surgical extraction with both distomolars along with bilateral impacted mandibular third molars. Supernumerary teeth are most commonly found in males as compared to females and in maxilla as compared to mandible and these are commonly present in the anterior teeth region. Hence, this was very rare case and extractions of both distomolars were performed under local anaesthesia and case was successfully managed.



Fig. 1: Orthopantomogram of case no. 1

Case Report 2

A 23 years old male patient visited our institute with the chief complaints of pain and food lodgement in the lower right back teeth region of jaw. On clinical examination, pericoronitis was observed in the mandibular right posterior teeth region of the jaw.

On radiographic examination, presence of distomolar in the fourth quadrant of jaw was observed. Fig. 2 describes this patient's orthopantamogram. The horizontally impacted right side mandibular third molar was seen which was associated with horizontally impacted distomolar. Due to this, patient was suffering from pain, food lodgement and pericoronitis in the mandibular right posterior teeth region of jaw. Radiographic examination also revealed the presence of distoangularly impacted third molar in the third quadrant, i.e., in the mandibular left posterior teeth region of the jaw.

Patient was advised to undergo the surgical extraction of mandibular right third molar along with the distomolar as they were symptomatic. Surgical extraction of both these teeth were performed under local anaesthesia and case was managed. The unique feature about this case, that distomolar was present at distal side of horizontally impacted mandibular third molar.



Fig. 2: Orthopantamogram of case no. 2

Case Report 3

A 30 years old male patient visited our institute with the chief complaint of decayed tooth in the lower left back teeth region of the jaw. On clinical examination, occlusal caries was seen in the mandibular left second molar. Patient was advised to undergo radiographic examination. On radiographic examination, an accidental finding of presence of the distomolar in the mandibular left posterior teeth region was observed. Fig. 3 shows its orthopantamogram which reveals presence of this rare entity in the mandibular left posterior teeth region of jaw. This distomolar tooth was impacted and its crown was present buccally. This is very rare phenomenon.

This patient was advised to undergo the surgical extraction with this distomolar as it was causing root resorption of adjacent permanent molar. This case was also successfully managed in our institute.



Fig. 3: Orthopantamogram of case no. 3

Case Report 4

A 31 years old male patient visited our institute with the chief complaint of pain in the lower right back teeth region of the jaw. On radiographic examination, multiple distomolars were seen. In this case, distomolars were present in 1st, 2nd and 4th quadrants of jaw. Fig. 4 shows its orthopantamogram. It reveals the presence of bilateral maxillary distomolars. Both maxillary distomolars were deeply impacted and was causing impingement on adjacent teeth which can lead to root resorption. Hence, surgical extraction of both these maxillary distomolars was advised. Mandibular right side third molar was mesioangularly impacted and was associated with distomolar. Hence, surgical extraction of both these teeth was recommended. All necessary preoperative investigations were done and this case was successfully managed.

The presence of bilateral maxillary distomolars is the rarest phenomenon.³ Multiple supernumerary teeth are seen in less than 1 % of all cases of supernumerary teeth.¹ Only 4 case reports of bilateral maxillary molars have been noticed by an extensive review of literature by Medline.³ Hence, this was very rare and unique case.



Fig. 4: Orthopantamogram of case no. 4

Discussion

When teeth are present as an addition to the normal series of permanent dentition or primary dentition, those teeth are known as "supernumerary teeth". Supernumerary teeth can be classified in various ways as follows^{1,2}:

According to Chronology

1. Predeciduous
2. Past permanent / Complementary

According to Morphology

1. Odontoma

- a. Complex composite odontome
- b. Compound composite odontome
2. Supplemental / Eumorphic
3. Rudimentary / Dysmorphic
 - a. Conical
 - b. Tuberculate
 - c. Molariform

According to Topography

1. Mesiodens
2. Paramolars
3. Distomolars
4. Parapremolars

According to Orientation

1. Vertical
2. Inverted
3. Transverse

“Phylogenetic theory” and “dichotomy theory” were being proposed to explain the occurrence of supernumerary teeth. According to the phylogenetic theory, hyperdontia is the result of atavism. Return of an ancestral type or condition is known as atavism. Therefore, occurrence of supernumerary paramolars may be considered as the atavistic appearance of fourth molar of deciduous dentition. Many authors rejected this phylogenetic theory. According to the dichotomy theory, supernumerary tooth occurs due to dichotomy of tooth bud, i.e., splitting of tooth bud. It is also suggested that supernumerary teeth can occur because of a combination of genetic & environmental factors or because of hyperactive dental lamina (hyperactive dental lamina theory).^{1,2,4,6}

Supernumerary molars may be either asymptomatic or can cause some complications as follows^{1,4,7}

1. Supernumerary molars may delay eruption of associated permanent teeth or they may cause failure of eruption of adjacent permanent teeth. They may lead to ectopic eruption of adjacent teeth.
2. Supernumerary molars may lead to displacement or rotation of adjacent teeth.
3. Crowding of teeth and malocclusion of dentition may occur due to the presence of supernumerary molars.
4. Buccally placed paramolar can cause traumatic bite, laceration of buccal mucosa.
5. Supernumerary molars can cause root resorption of adjacent teeth. They can lead to plaque retention, dental caries, gingival inflammation and localized periodontitis.
6. Supernumerary molars can lead to follicular cyst formation, trigeminal neuralgia.

Radiographic examination plays an important role in detecting and locating supernumerary teeth. Orthopantomograms, cone beam computed tomography [CBCT] and spiral computed tomography proves beneficial radiographic tools in detecting supernumerary teeth.⁴

Management of supernumerary molars include either observation or extraction. The treatment depends upon the position on supernumerary molar and whether it causes any clinical complications. If the supernumerary molar is

asymptomatic, observation is advised, i.e., monitoring that patient radiographically as well as clinically. But, if the supernumerary molar is symptomatic and causing any clinical complications, it is recommended to advice that supernumerary molar.^{1,2,4,6}

Conclusion

Dental surgeon should have knowledge about various types of supernumerary molars. Dental surgeons should be aware of various complications which might occur due to presence of supernumerary molars. If these conditions are suspected, clinician should perform necessary investigations and he should manage these cases appropriately.^{1,2,4,6}

Conflict of Interest: None.

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