CASE REPORT

Bilateral supplemental permanent maxillary lateral incisors in a non-syndromic patient

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SUMMARY

A supernumerary tooth is an additional entity to the normal series and can be seen in all quadrants of the jaw. Occurrence may be single or multiple, unilateral or bilateral, erupted or impacted in one or in both jaws. Multiple supernumeraries are rare in individuals with no other associated disease or syndromes. The conditions commonly associated with an increased prevalence of supernumerary teeth include cleft lip and palate, cleidocranial dysplasia and Gardner syndrome. The supplemental supernumerary refers to a duplication of teeth in normal series and is found at the end of a tooth series. A supplemental tooth may closely resemble the teeth of the group to which it belongs or it may bear little resemblance in size or shape to the teeth with which it is associated. This report presents a case with bilateral supplemental upper permanent lateral incisors without any symptoms of associated disorders.

BACKGROUND

A supernumerary tooth is an additional entity to the normal series and can be seen in all quadrants of the jaw. Occurrence may be single or multiple, unilateral or bilateral, erupted or impacted in one or in both jaws. Multiple supernumeraries are rare in individuals with no other associated disease or syndromes. The conditions commonly associated with an increased prevalence of supernumerary teeth include cleft lip and palate, cleidocranial dysplasia and Gardner syndrome. The supplemental supernumerary refers to a duplication of teeth in the normal series and is found at the end of a tooth series. A supplemental tooth may closely resemble the teeth of the group to which it belongs or it may bear little resemblance in size or shape to the teeth with which it is associated. This report presents a case with bilateral supplemental upper permanent lateral incisors without any symptoms of associated disorders.

Supernumerary teeth are defined as teeth that are in excess to the normal tooth number in the dental formula. The prevalence of supernumerary teeth is 0.2–1.9% in deciduous dentition and 1–4% in permanent dentition.¹ Supernumerary teeth are believed to develop from a third tooth bud arising from the dental lamina near the permanent tooth bud or possibly from splitting of the permanent bud itself. Hyperactivity theory suggests that supernumeraries are formed as a result of local, independent, conditioned hyperactivity of the lamina.² Primosch³ divided supernumerary teeth into two types depending on their shape. Supernumerary teeth with normal shape and size, which resemble a particular tooth

Figure 1 Frontal view of teeth in occlusion.

from the normal dentition, are called supplemental teeth. Teeth that do not resemble the normal teeth in shape or size are called dysmorphic teeth. These can be further classified as conical, tuberculate and molariform teeth. Supplemental teeth are rare as compared with dysmorphic teeth. Bilateral supplemental teeth are rarer as compared with unilateral supplemental teeth. The prevalence of bilateral maxillary lateral incisor supplemental teeth is very low with few cases reported.

CASE PRESENTATION

A 14-year-old female patient presented to the outpatient department with the spacing between her front teeth. On clinical examination, it was seen that the patient had a full complement of teeth except for the right upper first molar, which was extracted 1 year prior due to caries and unerupted third molars (figure 1). In addition to this, the patient had supplemental bilateral maxillary lateral incisors (figure 2). The patient had class I molar relation and overjet was increased (figure 3). The patient also showed spacing between the upper and lower anterior teeth (figures 2 and 3). Occlusal view of the upper arch showed supplemental bilateral maxillary lateral incisors (figure 4). Upper left

Figure 2 Right lateral view of teeth in occlusion.

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Figure 3 Left lateral view of teeth in occlusion.

first molar and lower right and left first molars were filled. The patient showed no other clinical signs or symptoms of any associated syndrome.

INVESTIGATIONS

Orthopantomogram (OPG) was advised to the patient. OPG showed normal root morphology for all the four maxillary lateral incisors (figure 5). OPG also showed unerupted upper and lower third molars, bilaterally.

DIFFERENTIAL DIAGNOSIS

The patient was diagnosed as having bilateral supplemental maxillary lateral incisors. Orthodontically, the patient had Angle's class I malocclusion. Supernumerary teeth are seen in cases having cleft lip and palate, cleidocranial dysplasia and Gardner syndrome, but in this patient no symptoms associated with these were found.

TREATMENT

The patient was advised orthodontic treatment without extraction of any teeth. She was also advised restoration of upper right first permanent molar.

DISCUSSION

Cases having supplemental teeth sometimes go unnoticed because of their resemblance to normal teeth, unless they are causing problems. These supplemental teeth should be diagnosed early and decision about their extraction should be based on associated dental problems being created by them. They frequently cause crowding and malalignment of the teeth as the total tooth material in such cases is increased. Lo Giudice *et al*⁴ reported a case with multiple supernumerary teeth and

Figure 4 Occlusal view of maxillary arch.

Figure 5 Orthopantomogram showing bilateral supplemental lateral incisors.

supplemental maxillary lateral incisors. In their case the supplemental teeth were extracted to facilitate the eruption of normal permanent dentition. Shah *et al*² emphasised that supernumerary teeth present in various regions of the maxilla and mandible can cause complications in the dentition. Such conditions should be diagnosed early and managed according to the presenting feature so that further complications can be minimised in the developing dentition. Singla and Negi⁵ reported a case of non-syndromic, bilateral supplemental maxillary lateral incisors with crowding in the anterior region. The extraction of supplemental teeth was planned as there was arch length discrepancy. The patient was treated with alignment of the remaining teeth. Yildirim and Bayrak¹ reported a case with bilateral supplemental primary as well as permanent maxillary lateral incisors. Anil⁶ reported a case of bilateral supplemental maxillary lateral incisors that were causing crowding and poor aesthetics in the patient. Nagpal *et al*⁷ reported a case of non-syndromic, bilateral supplemental maxillary lateral incisors. Rodrigues *et al*⁸ reported a case with a unilateral supplemental permanent maxillary lateral incisor. Supplemental teeth and their management should be considered along with a comprehensive treatment plan. Management should be based on the position of the supplemental teeth and the presence of any pathological changes, aesthetic problems or difficulty in maintaining oral hygiene.

Learning points

- ▶ Supernumerary teeth with normal shape and size that resemble a particular tooth from the normal dentition are called supplemental teeth.
- ▶ When supernumerary teeth are present, conditions characterised by the presence of hyperdontia should be investigated and excluded.
- ▶ Supplemental teeth should be managed according to the presenting feature so that further complications can be minimised in the developing dentition.
- ▶ Extraction of supplemental teeth can be planned if there is arch length discrepancy.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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