

# Non-syndromic multiple supernumerary teeth: a rare entity

Jiwanasha Manish Agrawal,<sup>1</sup> Manish Suresh Agrawal,<sup>1</sup> Lalita Girish Nanjannawar,<sup>1</sup> Raghavendra Vithalappa Adaki<sup>2</sup>

<sup>1</sup>Department of Orthodontics, Bharti Vidyapeeth Dental College & Hospital, Sangli, Maharashtra, India

<sup>2</sup>Department of Prosthodontics, Bharti Vidyapeeth Dental College & Hospital, Sangli, Maharashtra, India

## Correspondence to

Dr Jiwanasha Manish Agrawal, smilesnprofiles@rediffmail.com

## SUMMARY

Hyperdontia or supernumerary teeth without associated syndromes is a rare phenomenon, as supernumerary teeth are usually associated with cleft lip and palate or other syndromes such as Gardeners syndrome, cleidocranial dysplasia, trichorhinophalangeal syndrome, etc. A 15-year-old girl reported for orthodontic treatment with a chief complaint of irregular teeth and unaesthetic smile. On examination class I malocclusion with severe crowding of upper anteriors, anterior open bite of 5 mm, cross bite with upper right posteriors, upper midline shift to right by 5 mm and two supernumerary teeth placed buccally in between 16 & 17 and 26 & 27, respectively, were found. On routine radiographical examination, two additional impacted supernumerary teeth were noticed distal to 18 and in mandibular arch in between roots of 35 and 36. A general physician was consulted who confirmed that there was no associated syndrome. Family history did not reveal any positive findings.

## BACKGROUND

Multiple supernumerary teeth are usually associated with cleft lip and palate or other syndromes such as Gardeners syndrome, cleidocranial dysplasia, trichorhinophalangeal syndrome, etc.<sup>1</sup> However, the presence of multiple supernumerary teeth in the absence of any associated systemic condition/syndrome is a rare occurrence. Supernumerary teeth can cause alterations in the neighbouring teeth, retained teeth or delayed eruption, ectopic eruptions, dental malpositions, occlusal problems, diastema, rotations of adjacent teeth, cyst lesions or resorption of contiguous teeth,<sup>2</sup> therefore an early diagnosis and adequate treatment are essential.

## CASE PRESENTATION

A 15-year-old girl reported for orthodontic treatment with a chief complaint of irregular teeth and

unaesthetic smile. On examination class I malocclusion with severe crowding of upper anteriors, anterior open bite of 5 mm, cross bite with upper right posteriors, upper midline shift to right by 5 mm and two supernumerary teeth placed buccally in between 16 & 17 and 26 & 27, respectively, were found (figure 1). A general physician was consulted who confirmed that there was no associated syndrome. Family history did not reveal any positive findings.

## INVESTIGATIONS

Orthopantomogram, lateral cephalogram and maxillary occlusal view radiograph were advised (figure 2). A thorough physical examination was carried out to rule out presence of any systemic conditions or syndromes.

## TREATMENT

On radiographical examination, two additional impacted supernumerary teeth were noticed distal to 18 and in mandibular arch in between 35 and 36 roots. Cephalometric analysis revealed class III skeletal pattern with anterior open bite and proclined upper and lower anteriors.

Based on the above findings fixed orthodontic treatment was advised for which extraction of two erupted supernumerary teeth in the maxillary arch was considered. For the two impacted supernumerary teeth, it was decided to wait and watch. Intervention was advised only if these teeth showed any pathological changes or tendency for cyst formation. The patient and her parents were educated and adequately counselled.

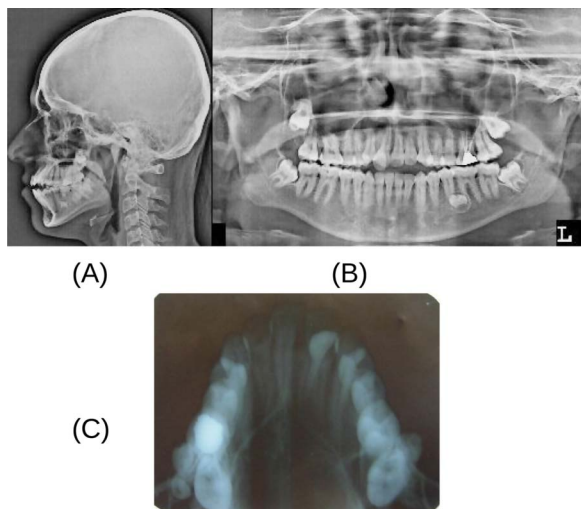
## DISCUSSION

Hyperdontia seems to occur more often in patients with hereditary factors<sup>3</sup> with a male: female ratio of 2:1<sup>4</sup> and is found more often unilaterally



**Figure 1** Intraoral and extraoral photographs of the patient.

**To cite:** Agrawal JM, Agrawal MS, Nanjannawar LG, et al. *BMJ Case Reports* Published online: [please include Day Month Year] doi:10.1136/bcr-2012-007796



**Figure 2** (A) Lateral cephalogram, (B) orthopantomogram and (C) maxillary occlusal view radiograph.

than bilaterally.<sup>5</sup> Presence of multiple supernumerary teeth in the absence of any associated systemic condition/syndrome is a rare occurrence.<sup>6</sup> The exact aetiology of supernumerary teeth is unknown. However, several theories have been postulated to explain their presence: an abnormal reaction to a local traumatic episode, environmental factors, the phylogenetic theory, dichotomy of tooth germ and the theory of hyperactivity of dental lamina, the autonomic recessive inheritance or linked to the X chromosome are accepted broadly.<sup>7–9</sup> The present case conforms as non-syndromic multiple supplemental supernumerary teeth. The patient was completely asymptomatic and the presence of four supernumerary teeth was an incidental finding.

Usually, supernumerary teeth are removed surgically, often due to retention of permanent teeth in the region. In cases where the supernumerary teeth do not cause alterations in the eruption, position or integrity of permanent dentition, a conservative approach is preferred. Each case must be therefore considered individually concerning its treatment taking into account untoward developments like malocclusion, retention of permanent teeth or tendency for cyst formation etc. Close observation with regular radiographical controls is recommended.

### Learning points

- ▶ Hyperdontia is a sign of a clinical picture which is definitely more complex and further anomalies are always present.
- ▶ Multiple supernumerary teeth are usually associated with cleft lip and palate or other syndromes such as Gardeners syndrome, cleidocranial dysplasia, trichorhinophalangi syndrome, etc.
- ▶ Hyperdontia or supernumerary teeth without associated syndromes is a rare phenomenon.
- ▶ Supernumerary teeth might be related to hereditary factor, hence, careful family history is a must.
- ▶ Supernumerary teeth can give rise to a broad range of complications such as delayed eruption, ectopic eruptions, dental malpositions, cyst lesions or resorption of contiguous teeth, therefore an early diagnosis and adequate treatment are essential.
- ▶ Close observation with regular radiographical controls is recommended.
- ▶ The related clinical problems should be considered primarily than treating the presence of supernumerary teeth, in instances where presence of supernumerary teeth does not cause any alteration in position or integrity of permanent teeth.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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