

A case report of a rare finding of supernumerary primary and permanent canines

Kate Parker¹, Norman Hay²

Contributors:

¹Senior House Officer in Oral and Maxillofacial Surgery, Dental and Maxillofacial Department, Great Ormond Street Hospital for Children, London, United Kingdom; ²Consultant Orthodontist, Dental and Maxillofacial Department, Great Ormond Street Hospital for Children, London, United Kingdom.

Correspondence:

Dr. Kate Parker. Dental and Maxillofacial Department, Great Ormond Street Hospital for Children, Great Ormond Street, London, WC1N 3JH, United Kingdom.

Email: parker.kate@hotmail.com

How to cite the article:

Parker K, Hay N. A case report of a rare finding of supernumerary primary and permanent canines. J Int Oral Health 2014;6(2):129-131.

Abstract:

A supernumerary tooth is a tooth that is additional to the normal series of teeth. These can occur anywhere in the primary or permanent dentition and are most commonly found in the anterior maxilla. Supernumerary canines are rare with little available literature and case reports in this area. This case presents a patient with a unilateral maxillary supernumerary deciduous and permanent canine associated with an unusual cleft of the alveolus.

Key Words: Canines, gingival cleft, supernumerary teeth

Introduction

A supernumerary tooth is a tooth that is additional to the normal series of teeth.¹ These can occur anywhere in the primary or permanent dentition with a prevalence between 0.1% and 3.8%.² Studies have found supernumerary teeth to be more common in the permanent dentition occurring in approximately 2.1% of patients, compared to 0.8% of patients in the primary dentition.^{3,4}

Supernumerary teeth are most commonly found in the anterior maxilla with common supernumeraries including mesiodens and tuberculate teeth.¹ Supernumerary canines are rare with little literature and case reports available. This case presents a patient with unilateral maxillary supernumerary primary and permanent canines associated with an unusual cleft of the alveolus.

Review of the current literature reveals that there are limited published cases of supernumerary canines. One

case reports bilateral supernumerary permanent canines in the maxilla in a non-syndromic child.⁵ Another case reports bilateral supernumerary permanent canines in the mandible.⁶ There is only one case where the supernumerary canines are found in both the primary and the permanent dentition⁷ and this case differs from the case described here due to the different presentation and absence of a gingival cleft. As there are very few published reports of supernumerary canines this case report is an important addition to the literature and knowledge base in this area.

Case Report

A girl aged 6 years and 4 months was referred to the Great Ormond Street Hospital Dental Department, concerning the presence of a supernumerary primary canine and a possible alveolar cleft. The supernumerary tooth was not of aesthetic concern to the patient or parents and was not causing any functional problems. The patient had a history of congenital hydrocephalus for which a ventriculo-peritoneal shunt was placed 1 week after birth with no subsequent problems. She had left fibula hemimelia with the left leg being 4cm shorter than right, a divergent squint and global developmental delay.

On examination, extra-orally there were no obvious abnormalities and no external manifestations of a cleft. Intra-orally the patient showed delayed dental development. In the upper right quadrant the primary canine and the primary supernumerary canine were



Figure 1: Right lateral view photograph.



Figure 2: Palatal view photograph.

present on either side of an alveolar cleft appearing as an invagination of the gingival mucosa (Figure 1 and 2). The appearance of the gingiva in this area was consistent with expected reduced alveolar bone. A DPT radiograph taken shows relative radiolucency between the roots of the two canines (Figure 3).

The patient was diagnosed with having a minor alveolar



Figure 3: Close up view from DPT aged 13 years.

cleft, but incidentally with no signs of an expected facial cleft and no associated cleft to the face, lip, nose or palate. Further radiographic assessment taken at a later date to assess dental development does not show the supernumerary upper right primary canine clearly, however, the supernumerary upper right permanent canine can be clearly seen in this image (Figure 4).

The aetiology of these supernumerary canines is uncertain. It is rare for an alveolar cleft to exist without any involvement of the face, lip, nose or palate. Review of the literature reveals a possible link to amniotic bands⁸ or dichotomy of the tooth bud during development.⁹ Alternatively the alveolar cleft and indentation of the gingiva may be consistent with a mild manifestation of a lateral facial cleft, classification Tessier

4,¹⁰ but without any external manifestation. Although the aetiology of this case remains unclear it does not affect further management.

The patient's dental centre line and occlusion are being monitored with no interceptive treatment undertaken to date. The current treatment plan is to allow the upper right primary canine and the supernumerary upper right primary canine to exfoliate naturally whilst monitoring the development of the upper right permanent canine with the likelihood that the supernumerary upper right permanent canine will require extraction in the future. The need for orthodontic treatment is continually being assessed and will be commenced if necessary according to how dental development progresses.

Discussion

This is a rare case of supernumerary canines presenting in both the primary and permanent dentitions in association with an isolated alveolar cleft in the absence of a corresponding facial cleft, the aetiology of which is unknown. This case poses the question of the possible



Figure 4: DPT aged 14 years.

aetiological origins of the supernumerary canines presenting unilaterally with an isolated alveolar cleft but without a corresponding facial cleft. There is limited literature available on this presentation of supernumerary canines thus making this case report an interesting addition to the existing literature in this area.

Conclusion

This case presents a rare finding of supernumerary primary and permanent canines of unknown aetiology. There is limited published literature on similar cases, therefore, this case adds to current knowledge in the field of supernumerary teeth.

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Acknowledgements

All authors have made substantive contributions to this manuscript and all have reviewed the final paper prior to its submission.