CASE REPORT

Odontodysplasia

Ghost teeth

This case describes a rare developmental anomaly called regional odontodysplasia, also known as 'ghost teeth'. We felt it was important to highlight to the readers such an unusual condition which requires a multidisciplinary approach in management.

A seven-year-old boy was referred to our orthodontic department following presentation to our emergency department with facial swelling and severe toothache, and subsequent drainage of an abscess and extraction of a hypoplastic 26 under general anaesthetic.

His mother reported that his 'baby teeth were floating in nothing', and were consequently extracted. She also reported him having multiple episodes of pain and facial swelling affecting the maxillary left quadrant since he was 18 months old, resulting in a number of interventions under general anaesthetic.

Clinical examination revealed an absence of teeth from 11 to 16 (Fig. 1). The left maxillary ridge was atrophic, and the enamel of his remaining dentition had a generalised 'mottled' appearance. An occlusal cant was visible on smiling, and his 36 had over-erupted.

Radiographic examination (Fig. 2) revealed the absence of all permanent teeth in the maxillary left quadrant apart from 25 and 27, and a typical 'ghost-like' shadow indicating dental tissues of 26. This classic radiographic appearance gives the condition its name, 'ghost teeth'. Due to the hypomineralisation, there is less distinction between enamel and dentine so the ghost teeth appear less radiopaque than the surrounding dentition. The enamel and dentine layers are also often thin, with large pulp chambers and shortened roots.

A diagnosis of regional odontodysplasia was given based on clinical and radiographic findings.

Regional odontodysplasia has a reported incidence of less than one in a million.[1] It is characterised by hypomineralisation, hypocalcification and hypoplasia of enamel and dentine,

Fig. 1 Intraoral view showing absent teeth in the left maxillary quadrant

Fig. 2 Digital orthopantomogram indicating 'ghost teeth' in the left maxillary quadrant

and can affect the primary and secondary teeth, often in a unilateral and segmental fashion. It is more common in the maxilla than the mandible, and affects female more than male patients. The aetiology is uncertain, but numerous factors have been suggested including local trauma, infection, teratogenic drugs, irradiation, fevers associated with childhood disease, ischaemia or vascular defects.[2]

Short-term aims involve preventing acute episodes of pain and infection, and managing the developing dentition. This may require frequent examinations with targeted dental prevention, and even prophylactic extractions of ghost teeth. Long-term aims of management include preventing overeruption of opposing teeth and space preservation, all of which can help to improve both aesthetics and function, whilst minimising any potential psychosocial effects of absent teeth.

For our patient, joint consultations with orthodontics and oral surgery were required, which also necessitated referral to the paediatric dental team for management of missing teeth. We are pleased to report that our patient has remained asymptomatic at follow-up examinations, and has been delighted with the provision of an upper partial denture to address those aforementioned long-term aims.

Although common things occur commonly, it is also important to be aware of rarer conditions, as they often require a collaborative approach between multiple specialties in order to obtain an optimal patient outcome.

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References

1. Rashidian A, Afsharian Zadeh M, Azarshab M, Zarrabian T. Regional odontodysplasia: Report of a case. *J Dent (Shiraz)* 2013; **14:** 197–200.
2. Ozer L, Cetiner S, Ersoy E. Regional odontodysplasia: Report of a case. *J Clin Pediatr Dent* 2004; **29:** 45–48.

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