

'Dilated odontoma': an incidental finding

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DESCRIPTION

The authors report an incidental finding in a 23-year-old man: an unusual case of dens invaginatus (type III), in relation to an upper left maxillary tooth (tooth #28). The patient presented for a routine dental check-up to the department of oral and maxillofacial medicine and diagnostic sciences. No significant medical history was elicited. Panoramic and full-mouth radiographic series were obtained after a detailed clinical examination (figures 1 and 2).

This rare malformation usually occurs in primary, permanent or supernumerary teeth.¹ Although frequently and erroneously called 'dilated odontoma', dens invaginatus must be differentiated from an odontoma; it is a well-known and described complex variant. Dens invaginatus should not be regarded as a tumour per se, but rather as a tooth malformation that often presents itself as a single calcified structure with a more radiolucent central portion.¹⁻³

The correct terminology for this malformation should be dens in dente or dens invaginatus type III. The term 'dilated odontoma' was first coined to describe a severe kind of dens invaginatus and must not be considered as a type of odontoma, which is a hamartomatous tumour, according to the WHO's Classification of Head and Neck Tumours.²

The absence of additional dental abnormalities in the current case can be confirmed in the panoramic dental radiograph (figure 2), which helps to preclude other abnormalities that might lead to consideration of potential genetic causes involving genes known to participate in the development of teeth, particularly the following five: MSX1, DLX1 and 2, PAX9 or PITX2.¹⁻³

Although type III dens invaginatus often presents as an invagination extending through the root, with enamel lining the invagination, the anatomical location, orientation and type of radiographic examination routinely performed during the first



Figure 2 Panoramic radiograph showing dilated odontoma with radiolucent centre and radiopaque periphery giving an appearance of doughnut.

appointment did not enable us to assess such a feature. Advanced imaging such as cone beam CT could have been performed. However, the cost involved and lack of impact on diagnosis and management precluded us from carrying on any further advanced imaging.⁴

The patient was referred to the oral and maxillofacial surgery department for surgical evaluation and management.

Learning points

- ▶ It is important to recognise 'dilated odontoma' as a dental anomaly rather than a true hamartoma.
- ▶ The anomaly has the characteristic radiographic feature of a radiolucent centre surrounded by radiopaque entity presenting as a doughnut shape.
- ▶ Combining ancillary imaging methods with a thorough clinical history is mandatory to attain an adequate diagnosis and for subsequent management.

Competing interests None declared.

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Figure 1 Intraoral periapical radiograph demonstrating dilated odontoma in the upper left maxillary projection.



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