CASE REPORT

Dental radiography

Oral aspects of sickle cell disease

Sir, a 20-year-old male of African descent was referred to our oral surgery clinic by his GDP following a presentation of non-specific, generalised pain affecting various areas in both the maxilla and mandible bilaterally. The pain arose several times each month with varying severity and duration with symptoms ongoing for over one year. The patient described the pain as a throbbing ache affecting the teeth, gingivae and bone. The GDP had taken a periapical radiograph of the lower left second molar (Fig. 1) and was concerned about a generalised radiolucency apical to the teeth in view.

The patient's medical history included sickle cell anaemia (SCA), for which he is under the care of a specialist haematology team. His medication included folic acid, penicillin and hydroxycarbamide. SCA is a severe form of sickle cell disease (SCD), which includes genetic blood disorders characterised by morphological changes to erythrocytes caused by sickle haemoglobin (HbS). These abnormalities can lead to haemolytic anaemia and episodes of micro-vascular vaso-occlusion, resulting in local hypoxia. This is the mechanism behind the characteristic painful vaso-occlusive crises experienced by affected patients.[1]

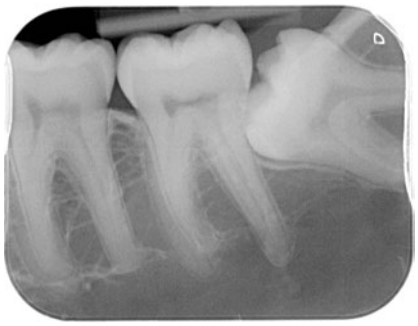

Fig. 1 Periapical radiograph of the lower left second molar

Clinical examination revealed very little of note, with no obvious signs of pathology or distinct abnormalities detected. It should be noted that the patient had excellent oral hygiene. We took an OPG (Fig. 2) in order to identify potential hard tissue sources of pathology in keeping with the patient's presenting complaint. The radiograph demonstrated increased radiolucency of the bone in the inferior body of the mandible, with a distinct, sparse trabecular pattern in this area. Superior to this, coarse trabeculae can be seen. Both of these radiographic signs have been reported in patients with SCA.[1,2,3,4,5] This may be attributed to bone marrow hyperplasia leading to bone resorption and reorganisation of the trabecular architecture.[3] We consider this OPG to be a useful example demonstrating the maxillofacial radiographic features of SCA.

Regarding the patient's dentition, there is no pathology of note. Interestingly, we noted two roots on both lower second premolars. Note that the lower incisors appear foreshortened and blurred due to the anterior mandible being out of the focal plane, secondary to a chin down position. This can be mistaken for external root resorption, which incidentally has increased prevalence in those affected by SCA.[6]

We suspect that the patient has been experiencing multiple episodes of vaso-occlusive events affecting the teeth and supporting structures. We have liaised with the consultant haematologist whom the patient is under the care of in order to make them aware of this aspect of the patient's disease.

We hope that this OPG together with the aforementioned non-specific history of pain provides useful information for clinicians to make reference to as a reminder of the oral effects of SCA which may present in general dental practice or secondary care dental services. Liaison with the patient's consultant haematologist in such cases is recommended and can help ensure effective management.

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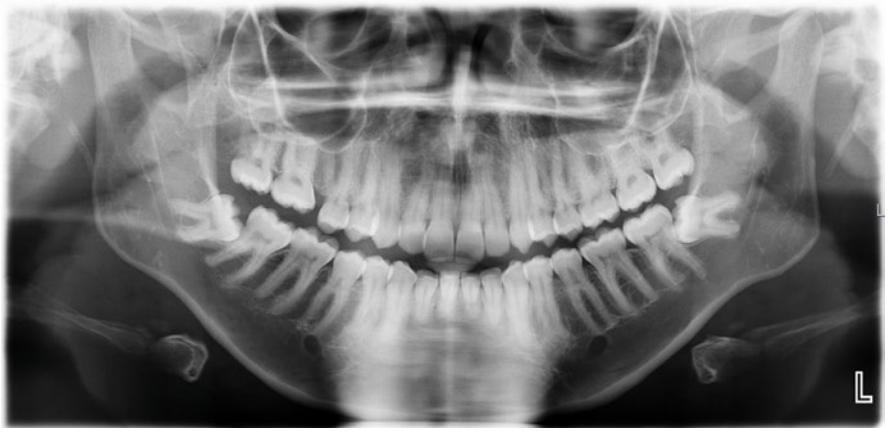

Fig. 2 Radiograph demonstrating increased radiolucency of the bone in the inferior body of the mandible

References

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Obstructed Stensen's duct

Sir, we present a case from our emergency department when we were asked to see a 65-year-old lady who had presented with a 'facial swelling'. The information that was passed on via the triage nurse was that the dentist had sent the patient in from general practice and the 'dental abscess' was very large. The patient's GDP thought that she had a fascial space infection of dental origin but a five day history of a progressively worsening swelling was reported.