CASE REPORT

Central haemangioma: variance in radiographic appearance

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Central haemangioma, a "great mimicker" which, fortunately, is a relatively rare condition, may pose a lethal risk for the patient. The diagnosis may become apparent only during biopsy or tooth extraction, which poses a risk of lethal exsanguination. Therefore, a correct diagnosis is desirable before any biopsy is undertaken. The clinician may not anticipate the severe haemorrhage because of vague clinical history, physical findings and ambiguous radiographic characteristics of the lesion. We report a case of central haemangioma of the mandible whose clinical and radiographic features were equivocal. In addition, an attempt is made to discuss all possible radiographic presentations of central haemangioma and consider differential diagnosis. This case is significant for the reason that it had diverse radiographic appearances in various areas of the lesion in different projections.


Keywords: haemangioma, capillary, mandible, aspiration, radiography

Case report

A 13-year-old female patient presented to the Department of Oral Medicine, complaining of a swelling in the left mandibular body for a duration of 1 year. She reported a similar swelling 10 years ago following trauma. That lesion was surgically treated.

Clinical examination

The swelling on the left side of the face resulted in facial asymmetry (Figure 1). It was approximately 4 cm x 5 cm in size, over the left body of the mandible with diffuse margins. The skin over the lesion appeared normal. The swelling had bony hard consistency and it was tender on palpation.

Intraoral examination showed obliteration of the buccal sulcus extending from the distal aspect of the mandibular left lateral incisor to the mesial aspect of the mandibular left second molar. There was expansion of the lateral aspect of the mandible with an irregular raised erythematous submucosal mass involving the attached gingiva, vestibule and buccal mucosa adjacent to mandibular left canine and first premolar (Figure 2). This area blanched on pressure but was without any pulsations. There was no evidence of bleeding from the gingival sulcus. The crowns of the mandibular left second premolar, first and second molar were displaced lingually with loss of occlusion on the left side. The crowns of the mandibular left canine and first premolar were rotated and a diastema of 4-5 mm was evident between the mandibular left first and second premolar. The mandibular left canine was shifted labially and a diastema of 2 mm existed between the mandibular left lateral incisor and canine. None of the teeth were tender or mobile. The teeth related to the lesion were vital.

The overall appearance of the lesion gave a clinical impression of vascular malformation in the body of the mandible.

Radiographic examination

A panoramic radiograph (Figure 3) disclosed coarse trabeculations causing areas of increased radiopacity with ground glass appearance of the bone surrounding the mandibular left canine, first and second premolar. Bone surrounding the mandibular left first and second premolar separated by bone septa giving a honeycomb appearance. There were multiple rounded loculations with fine bony septa located 4-5 mm below the roots of mandibular left second molar. Multiple tube-like radiopaque striae placed parallel to each other were evident distal to this region. Multiple scattered circular radiolucent areas without sclerotic border were seen in between the roots of mandibular left first and second molar. A sketch of the
panoramic radiograph showing left side of the mandible is demonstrated in Figure 3b.

Resorption of the root of the mandibular left premolar along with divergence of the mandibular left first and second premolar was seen. The outline of the mandibular canal was not traceable beyond the mesial aspect of the left mandibular second molar and it was displaced inferiorly. There was an increase in the vertical height of the mandible on the left side. This was suggestive of increase in the size of the involved bone, while keeping a relatively normal morphology.

Since the dense sclerotic pattern in the anterior mandible could be the overlapping density of cervical spine, an intraoral periapical radiograph of the left mandibular premolar region was taken to confirm the presence of sclerotic pattern in that area. It showed coarse trabeculations in between the first and second premolar (Figure 4).

A mandibular occlusal radiograph and its sketch (Figure 5) showed expansion of the buccal corbcal plate in the left mandibular body and displacement of the mandibular left first premolar, first and second molar

Figure 1  Swelling on the left side of the body of the mandible, with diffuse margins

Figure 2  Obliteration of the buccal sulcus extending from distal aspect of 32 to mesial aspect of 37. An irregular raised erythematous submucous mass involving the attached gingiva, vestibule and buccal mucosa in relation to 33 and 34, 35, 36 and 37 are displaced lingually. Crowns of 33 and 34 are rotated. 33 is shifted buccally

Figure 3 (a) A panoramic image shows coarse trabeculations in the bone surrounding 33, 34 and 35 causing areas of increased radiodensity. Bone beneath 36 and mesial root of 37 shows small circular radiolucencies separated by bony septa giving a honeycomb appearance. Multiple rounded locules with fine bony trabeculations traversing them 4–5 mm below the roots of 37. Multiple tube like radiopaque striae placed parallel to each other were evident distal to this region. Inferiorly displaced mandibular canal whose outline not traceable beyond the mesial aspect of 37. Divergence of roots of 33, 34 and 35 with resorption of root of 34.

(b) Sketch of the panoramic radiograph showing left side of the mandible. A, Areas of coarse trabeculations; B, Honeycomb appearance; C, Multiple rounded locules; D, Parallel tube like trabeculations; E, Inferiorly displaced mandibular canal, outline not traceable beyond the mesial aspect of 37

Figure 4  A periapical radiograph showing coarse trabeculations in between 34 and 35
Also evidence of fine trabeculations or spiculated bone was seen emanating from the buccal aspect of the mandibular cortex. There was enlargement of the adjacent bone.

There was a large variation in radiographic appearance and based on clinical impression of a vascular lesion, an aspiration was performed which yielded fresh blood.

Review of previous records

Clinical notes from the previous records indicated the presence of a bony hard swelling over the body of the left mandible when the child was 3 years old, which had occurred 2 months after an episode of trauma to the left side of lower jaw. There was a history of bleeding for a duration of 1 day from the associated tooth region subsequent to the trauma.

Radiographic notes described an ill-defined radiolucency in relation to the mandibular left deciduous canine, first and second molar and a mandibular occlusal radiograph showing a typical "sunburst" effect.

Surgical notes revealed that an excisional biopsy was done under general anaesthesia. Profuse bleeding encountered during surgery was controlled by local measures.

Histopathological examination (Figure 6) of the decalcified section after the surgery, 10 years ago, had shown broad lamellar bony trabeculae with marrow spaces exhibiting poorly arranged fibrillar stroma with varying number of mesenchymal cells, numerous vascular channels lined by endothelial cells and extravasated red blood cells. Soft tissue sections showed highly cellular connective tissue stroma with endothelial cells, budding capillaries, and areas of haemorrhage with haemosiderin pigment. The lesion was diagnosed as capillary haemangioma.

The archived histopathological slide (Figure 6) was reviewed.

On the basis of a diagnosis of capillary haemangioma, angiography and pre-operative embolisation were advised but due to financial constraints patient did not comply. No other treatment modality was performed, as she was lost to follow up.