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Central haemangioma of the mandible in a 7-year old child

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Introduction

Central haemangioma of the jaws is rare and presents as a bony swelling, slow-growing, painful or as an asymptomatic lesion that may cause facial asymmetry[1]. Radiographic features include an osteolytic and multilocular lesion with poorly defined and irregular margins[2]. Because both clinical and radiographic features are not pathognomonics, careful intervention is necessary, avoiding notable and uncontrollable haemorrhage. The aim of this report was to describe an interesting case of mandible haemangioma in a child.

Case report

A 7-year-old-boy was referred to Minas Gerais Clinical Hospital, Belo Horizonte, Minas Gerais, Brazil, because of intense gingival bleeding in the left lower first molar distal region, preceded by three vomiting episodes with the presence of blood clots. Clinical examination showed a painless swelling in the left mandibular region, firm on palpation, causing facial asymmetry. The alveolar ridge was covered by a blue–red mucosa. The panoramic radiograph showed an osteolytic lesion, with poorly defined and irregular margins, involving the left inferior molar region. The first molar involved in the lesion presented delay in its radicular formation and high degree of mobility (Fig. 1).

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Because of intense gingival bleeding, the patient presented severe anaemia, and was submitted to a blood transfusion. A selective angiography of carotid and vertebral–basilar system was performed, and an arteriovenous malformation could be observed in the left mandibular region, with a high flux and irrigated volume to the inferior ridge ramus of the facial and lingual artery, as well as the internal maxillary ramus, concluding the diagnosis of central haemangioma (Fig. 2). Because of age and debility of the patient, the site and size of the lesion, and to avoid haemorrhage, it was proposed to perform sessions of embolization. After each embolization, the patient was maintained under clinical and radiographic follow-up, and other sessions were performed according to evolution of the lesion. Two months after the first embolization, the patient was shown to be suffering from intense anaemia caused by chronic blood loss, and received a further blood transfusion. Thus, the child was submitted to another embolization using *N*-butyl-2-cyanoacrylate (Histoacryl, B. Brown Melsungen AG, Melsungen, Germany), and weekly use of iron administered intramuscularly was prescribed. Three months later, the patient was referred to the Felício Rocho Hospital, Minas Gerais, Brazil, presenting a new episode of acute anaemia. An additional embolization and a direct puncture of the lesion with an *N*-butyl-2-cyanoacrylate injection completely occluded the vascular lesion. In this moment, even after the treatments performed, the left lower permanent first molar still presented high mobility and was removed. At follow-up, 1 year and 7 months later, the patient showed complete bone healing (Fig. 3).

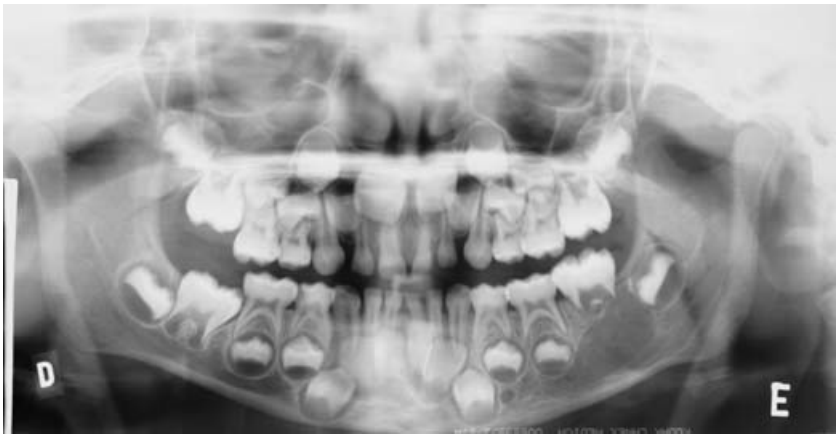

Fig. 1. Osteolytic lesion, with poorly defined and irregular margins, involving the left inferior molar region.

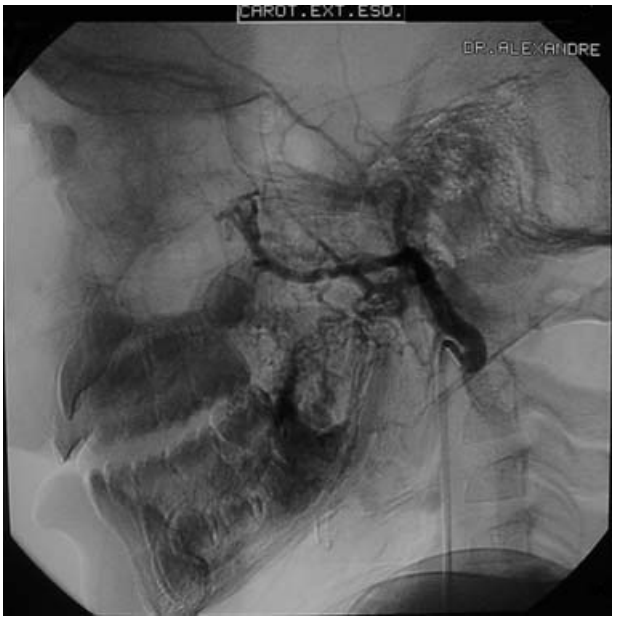

Fig. 2. External left carotid angiography demonstrating the high flux and irrigated volume of the arterial ramus.

Comments

A rare condition in the facial skeleton, in the jaws, haemangioma is more common in the mandible than in the maxilla, with a ratio of 3.3 : 1, mainly in the posterior region[1]. This lesion occurs more frequently in women than in men (2 : 1 ratio), and in the second decade of life[1,2]. The present case is rare, because it occurred in a 7-year-old boy.

Clinically, haemangioma of the jaw presents signs and symptoms variable, ranging from asymptomatic to discomfort, bleeding and mobile teeth, paraesthesia, pain, and swelling[3]. In some cases, it is a very dangerous lesion due to no pathognomonic features, so an incorrect surgical procedure may lead to notable and uncontrollable haemorrhage.

Radiographically, the lesions could be unilocular[3] or more frequently multilocular[2,4]. Radiopaque and sunray pattern had been also reported[4]. The periphery may be well defined by a cortical, and in others it may be ill-defined. Because of the noticeable variability of its clinical and radiological manifestations, various lesions could be included in the differential diagnoses, such as central giant cell granuloma, aneurysmal bone cyst, ameloblastoma, ameloblastic fibro-odontoma, and eventually malignant tumours such as osteosarcoma and multiple myeloma[2]. Particularly in the present case, because of intense bleeding and age of the patient, heamangioma was the main hypothesis of diagnosis.

Angiography represents a great diagnostic modality that confirms the presence of central haemangioma, delimiting the margins and indicating the vascular irrigation of the area[2]. In the current case, angiography was decisive for the final diagnosis.

The correct choice of the treatment depends on the size and location, age, and/or the history of previous complications[2]. In the present case, we considered the size and mainly the patient's age and debility because of the severe blood loss that led to anaemia. Curettage, embolization, radiation therapy, resection, or sclerosing agents have been reported[1,5]. Embolization by direct puncture and with sclerosing agents is an effective and a safe method for mandibular central haemangioma treatment, occluding blood vessels proximal to the lesion, controlling

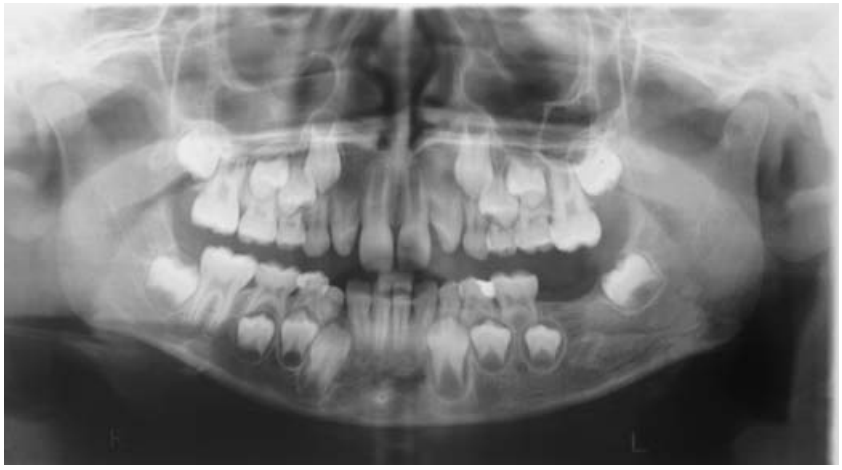

Fig. 3. Follow-up radiography 19 months after the treatment, showing full bone healing without signs of recurrence.

an extensive and a lethal blood loss[5]. In this case, the various embolization sessions were necessary because of the huge size of the lesion. Survival can be achieved in infants and children with life-threatening vascular malformations if a correct plan of treatment was planned and followed.

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