

Clinical Presentation and OPG Features of Ameloblastoma

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A 52-year-old male presented to the Department of Oral Medicine and Radiology with a chief complaint of swelling in the mandibular incisors and the right and left canine regions of the jaw, which had persisted for 2-3 months. The patient first noticed swelling in the same area 8-10 years ago, which tended to increase in size over time. Seven to eight years earlier, the right mandibular premolar and molar were extracted.

The face was grossly asymmetrical due to diffuse swelling in the mandibular front region extending antero-posteriorly from left para-symphysis to right para-symphysis region and supero-inferiorly from lower lip to 1 cm below the inferior border of the mandible of approximately 6x3 cm in size. It was roughly oval in shape, with a smooth surface and a firm consistency. The margins were diffuse, matching the surrounding skin in colour. On palpation, local temperature was raised, and tenderness was present. The right and left submandibular lymph nodes were palpable, measuring approximately 0.5x0.5 cm, and were firm in consistency, mobile to the underlying structure, and non-tender. A single submental lymph node was palpable, measuring approximately 2.0x1 cm, with a firm consistency, mobile to the underlying structure, enlarged, and tender.

Intraorally, diffuse swelling was seen on the mandibular front and left premolar region of the jaw. The surface was smooth, with diffuse greyish-black pigmentation on the alveolar ridge, and a bluish tint in the 32-33 area. The consistency was soft to firm, and the margins were diffuse [Table/Fig-1]. On palpation, tenderness was present; no crepitus or fluctuation was detected.



[Table/Fig-1]: Intra-oral examination.

Panoramic radiograph revealed a single large radiolucent lesion involving the para-symphysis and body of the mandible, of approximately 7x4 cm in size; Borders: the margins were irregular with corticated borders and the inferior border of mandible in right mandibular body were scalloping; Internal structure: radiolucent multilocular picture seen in relation with 43-47 region with intervening trabeculae and presence of scalloping borders - "Soap bubble" like appearance; Effect on adjacent structure: erosions with the inferior border of mandible in the right mandibular body [Table/Fig-2]. Clinico-radiographically suggestive of multilocular ameloblastoma involving the para-symphysis and body of the mandible.



[Table/Fig-2]: Panoramic radiograph shows a single large radiolucent lesion on the para-symphysis and body of the mandible.

Differential diagnosis:

- Central giant cell granuloma:** age under 30 (average 26) years, male to female ratio is 1:2.4 (female predominance), mandibular jaw and the anterior to second molar region are most commonly involved. Radiographic features: Slow growing, Strong propensity to expand cortical boundaries; Often displace and resorb teeth; Well-defined borders and no evidence of cortication; Internal structure: subtle granular pattern of calcification; and septae are granular/wispy septae emanate at right angle from periphery [1,2].
- Central haemangioma:** mostly occurs in the first decade with female predilection, the posterior body and ramus region of the mandibular jaw are most commonly involved. Radiographic features are slow growing, compressible/pulsatile and a bruit on auscultation; it shows expansion of the cortical plate. Often, displacement and root resorption are observed. Borders are well-defined and corticated. Internal structure: totally radiolucent to small areas of calcification. Formation of linear spicules of bone originates from the bone surface - sunray-like appearance [1,2].
- Odontogenic keratosis:** occurrence in the second and third decade. Slight male predominance is observed and posterior to the canine region of the mandibular jaw is affected. Radiographic features are slow growing but locally aggressive, showing minimal expansion of bone. The effect on surrounding structure is slightly displaced and resorbed teeth. Borders are scalloped and corticated. Internal structure is radiolucent. Septae are curved [1,2].

Ameloblastoma is the most frequent tumour in the oral cavity caused by remaining odontogenic epithelium. Ameloblastoma has been reported to constitute about 1% of all tumours and cysts of the jaw and 18% of odontogenic tumours [3]. Among the Indian studies, the most extensive study was conducted in the Marathwada region of Maharashtra, where histopathology records from 1992 to 2012 were reviewed. Of the 125 benign odontogenic tumours, the most common was the keratocystic odontogenic tumour (45%) followed by ameloblastoma (35%), odontoma (7%), and adenomatoid odontogenic tumour (5%) [4].

Even while dental X-rays (orthopantomogram, OPG) or plain film frequently show ameloblastoma originating within bone, the degree of soft tissue or bone invasion is often not precisely recorded. On an X-ray, the more common multilocular ameloblastoma has the classic "soap bubble" and "honeycomb" appearance [1]. Ameloblastoma is treated mainly with surgery. Other techniques, such as chemotherapy or radiotherapy, play a limited role and only in specific cases. To reduce recurrences and restore acceptable function and appearance in the donor area with the least amount of morbidity, ameloblastomas are surgically treated [4].

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