**ODONTOGENIC CYST OR TUMOUR? (CALCIFYING CYSTIC ODONTOGENIC TUMOUR VS ODONTOAMELOBLASTOMA)**

**THE DIAGNOSTIC DILEMMA**

**CLINICAL PRESENTATION**

15-year-old female presented with painful swelling of the right lower back region of the jaw. Swelling developed following trauma seven years ago and associated with increase in size and intermittent dull-aching pain since three to four years. Extra-orally, an oval swelling of bony-hard consistency, measuring 5x7 sq. cm., observed in the right body of the mandible, extending antero-posteriorly from angle of mandible to angle of mouth, inferiorly up to lower border of the mandible, and superiorly to the level of tragus. Corresponding intra-oral swelling obliterating right lower buccal vestibule. Put draining sinus opening at the buccal vestibule posterior to 46 and at the alveolar mucosa of 44; Teeth 45, 47 missing; Lingually inclined 46.

**RADIOLOGICAL FEATURES**

- Mixed radiopaque-radiolucent lesion on the right side of the mandible, extending from tooth 44 to the ramus of mandible.
- Scattered masses of calcification throughout the radiolucency.
- Tooth 47 displaced to the inferior border of mandible.
- Tooth 48 absent.
- Lingual and buccal cortical plate expansion.

**GROSSING/PROCESSING/STAINING PARTICULARS**

- Two teeth; Four bits of soft tissue; Ten bits of mixed tissue.
- Creamish white in colour; Soft to bony hard in consistency; Irregular surface.
- Radiological examination revealed the presence of calcified tissue in the specimens.
- Specimens subjected to decalcification followed by routine tissue processing.
- Hematoxylin and Eosin staining; Van Gieson staining to assess the ghost cells.

**HISTOPATHOLOGY**

- Dentinoid, enamel spaces, and primitive connective tissue gave the appearance of complex composite odontoma (Fig. 7).
- Numerous ghost cells (Fig. 8) with a central nuclear halo associated with 'Liesegang rings' (Fig. 1) and areas of odontogenic epithelial cells, led to the diagnosis of calcifying epithelial odontogenic tumor (CEOT).
- Dense fibrous connective tissue stroma with numerous calcifications resembling Liesegang rings (Fig. 1) and areas of odontogenic epithelial cells, led to the diagnosis of calcifying epithelial odontogenic tumor (CEOT).
- Odontogenic cells arranged in the form of nests (Fig. 2), cords, rosettes (Fig. 3) and odontogenic follicles lined by ameloblast-like cells with central stellate reticulum-like cells and cystic spaces (Fig. 4).
- Calcified structures simulating dentinoid (Fig. 5), enamel spaces, ectomesenchymal tissue, and globular cementum-like masses (Fig. 6).
- Calcified structures simulating dentinoid (Fig. 5), enamel spaces, and primitive connective tissue gave the appearance of complex composite odontoma (Fig. 7).

**REFERENCES**