

Evaluation of odontogenic tumors and cysts diagnosed by Cone Beam Computed Tomography at the University Dental Hospital, Peradeniya

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Cysts and tumors of the jaw bones are commonly encountered lesions in dental practice in Sri Lanka. Even though their presence could be observed in conventional radiographs, accurate details about the lesion cannot be obtained using conventional radiography. Cone Beam Computed Tomography (CBCT) is an advanced imaging modality giving three dimensional images with minimal radiation dose. As it is a new technology in Sri Lanka there are no studies on the use of CBCT to detect cysts and tumors of the jaw bones in Sri Lanka.

A retrospective study was carried out to evaluate odontogenic cysts and tumors diagnosed using CBCT. Radiographic reports of patients referred for CBCT imaging to the Division of Oral Medicine and Radiology, Faculty of Dental Sciences, University of Peradeniya up to 2016 June were reviewed. Cases diagnosed radiologically as possible cysts or tumors were included in the study.

There were 39 such cases and of them 12 were diagnosed as odontogenic cysts and 26 as odontogenic tumors (OT) while one was diagnosed as either a cyst or a tumor. Most of the cases were reported in males (52.5%) and in the age group of 30-40 years. Both odontogenic cysts and tumors had developed on the left side of the angle of the mandible. Nearly 77% of the OT were unilocular lesions and all cysts were unilocular. Most of the odontogenic cyst and OT were uniformly radiolucent, whereas a few lesions were with mixed radiodensity. Just over 80% of OT and 83.3% of cystic lesions appeared as uniform radiolucencies. Most of the cysts showed no relationship with associated oral structures except some cysts which were associated with root resorption. In contrast OT showed a wide array of associations with anatomical structures ranging from displacement of teeth, involvement of inferior alveolar canal, maxillary sinuses and nasal cavity. The commonest OT reported was ameloblastoma.

CBCT is an important radiological technique for the diagnosis and pre-surgical assessment of OT and cysts. It helps in clear visualization of lesions with nearby anatomical structures which is important in the management of such lesions.