SDM
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"DIGITAL VOLUME TOMOGRAPHY IN THE ASSESSMENT OF MANDIBULAR INVASION IN PATIENTS WITH SQUAMOUS CELL CARCINOMA OF THE ORAL CAVITY-A PROSPECTIVE STUDY"

by

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ABSTRACT

Objective:

To determine the diagnostic accuracy of Digital volume tomography (DVT) in comparison with orthopantomography (OPG), computed tomography (CT), clinical presentation and histological study in assessing mandibular bone invasion in patients with oral squamous cell carcinoma clinically adjacent or fixed to the mandible.

Setting:

SDM Craniofacial unit, SDM College of Dental Sciences and hospital, Dharwad.

Study Design:

- In this prospective study, 21 patients with biopsy proven Oral squamous cell carcinoma received OPG, Dentascan (CT) and DVT (CBCT) imaging presurgically. Exploratory periosteal stripping and direct inspection of resected mandible done intraoperatively. Radiologic evaluations were compared with histopathologic examinations of the resected tumour specimens. Statistical analysis was carried out and the sensitivity, specificity, positive predictive value and negative predictive value were calculated and compared.

ABSTRACT

.Results:

The sensitivity, specificity, positive predictive value and negative predictive value for OPG were 36.36%, 100%, 100% and 58.82% respectively; for Clinical presentation 81.82%, 100%, 100% and 83.83; and for Dentascan 100%, 90%, 91.67% and 100%; and for DVT 100%, 100%, 100% and 100%.

Conclusion:

DVT(CBCT) can accurately visualize bony involvement by a neoplasm in the mandible at a fraction of the cost of Dentascan (CT) and at a greatly reduced level of radiation. We conclude that DVT can aid in accurate preoperative staging of OSCC, as well as establishing the necessary extent of resection required to produce tumour free margins.

Key words:

Oral squamous cell carcinoma; mandibular invasion; Dentascan; DVT.