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COMPUTED TOMOGRAPHY OF PALATAL TUMORS

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HOW TO CITE THIS ARTICLE:

Sadashiva Gowda H. "Computed Tomography of Palatal Tumors". Journal of Evolution of Medical and Dental Sciences 2015; Vol.4, Issue 13, February 12; Page: 2192-2196, DOI: 10.14260/jemds/2015/315

ABSTRACT: Palatal tumors are rare tumors. In this retrospective study, we analysed our experience of 39 patients with histopathologically proven palatal tumors who have undergone CT in our hospital. To our best knowledge this study presents one of the largest series of palatal tumors. CT is an excellent tool for diagnosis of palatal tumors and helps in prognosis.

KEYWORDS: CT, palatal tumors.

INTRODUCTION: The palate is divided anatomically into the hard palate (part of the oral cavity) and the soft palate (Part of the oropharynx). Palatal tumors are rare tumors. Carcinoma of the palate accounts for approximately 2% of head and neck mucosal malignancies.^[1]

MATERIALS AND METHODS: A retrospective review of the electronic medical data base from January 2000 to December 2008, revealed 39 cases of palatal tumors. There were 27 males and 12 females between 17 and 81 years of age. Axial contrast enhanced CT was performed with coronal reconstruction in all cases. All cases were confirmed by biopsy.

CT was carried out after an overnight fasting and was carried out by using spiral CT. All scans were obtained in a single breath hold from the base of skull and thoracic inlet after giving 100ml of intravenous contrast. The parameters were 120 kVp and 280 mAs with a pitch of 1.5. The CT findings were retrospectively evaluated. The most clinical presentations were pain and ulceration in mouth and dysphagia. The major findings analysed are masses in palate (2), thickened palatal soft tissues & destruction of hard palate (2), invasion of adjacent structures & organs(4), lymphadenopathy (5). We found 29 malignant and 10 benign tumors (Fig. 7).

DISCUSSION: In the present study, the mean age of presentation was approximately 40yrs. Male predominance is a feature. Multiplicity of tumors was not seen. The study was good to identify the presence of the disease and extent. CT is not much useful in predicting the histopathology of the lesion.

Minor salivary gland cancers seem to predominate in the hard palate (Where there is the highest concentration of minor salivary glands). In the M.D. Anderson series, the most common minor salivary gland tumor of the palate was the adenoid cystic carcinoma, followed by terminal duct adenocarcinoma and mucoepidermoid-carcinoma.^[1] The most frequent minor salivary gland tumor was pleomorphic adenoma, which is similar to all published series.^[2,3,4,5] The most frequent malignant tumor was adenoid cystic carcinoma. This is similar to some studies.^[6,7,8.] Some studies showed a higher frequency among males.^[2,4]

We accept the limitations of this study. Most notably this was a retrospective study, cases collected over a number of years at a specialist center that may have with it some selection biases. Squamous cell carcinoma generally only mildly enhances on CECT imaging and can be subtle. On MR

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imaging scans, squamous cell carcinoma is isointense to muscle on T1W images, tends to be high on T2W signal, and generally exhibits mild to moderate homogenous enhancement.^[3]

MR imaging can be helpful in evaluating the full extent of medullary cavity involvement once the mandibular cortex has been violated. Perineural spread of tumor is a particular feature of adenoid cystic carcinomas.^[4]

The scope of the study is limited to describe the CECT characteristics of the palatal masses and the pattern of disease, not really the exact impact on the management and final outcome.

CONCLUSION: CT is an excellent technique which can show the gross pathologic features of palatal tumors, invasive pathway of malignant tumors and information for the relevant clinical management and prognosis.

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Fig. 1: CECT showing hypodense nodular lesion in the posterior aspect of right hard palate- pleomorphic adenoma.

Fig. 1

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Fig. 2: CECT showing homogenously enhancing mass in the region of hard palate on left side-adenoid cystic carcinoma.

Fig. 2

Fig. 3: CECT showing large infiltrating mass in the hard and soft palate-rhabdomyosarcoma.

Fig. 3

Fig. 4: CECT showing enhancing soft tissue lesion in the hard palate with bony erosion- mucoepidermoid carcinoma.

Fig. 4

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Fig. 5: CECT showing enhancing soft tissue density lesion in the left side of hard palate abutting the lingular surface and adjacent bone erosion-myoeplithelial carcinoma.

Fig. 5

Fig. 6: CECT showing infiltrative mass in hard palate-spindle cell carcinoma.

Fig. 6

Fig. 7: CECT showing heterogenous soft tissue lesion in hard palate-malignant melanoma.

Fig. 7

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FINANCIAL OR OTHER

COMPETING INTERESTS: None

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Date of Submission: 29/09/2014.
Date of Peer Review: 30/09/2014.
Date of Acceptance: 04/02/2015.
Date of Publishing: 11/02/2015.