Abstract: INTRODUCTION - Parapharyngeal space metastasis from thyroid carcinoma is very rare. Only very few cases have been recorded in review of literature. An occult thyroid carcinoma with parapharyngeal space metastasis may faade as a paraganglioma or a salivary gland tumour which requires a meticulous evaluation of the patient to arrive at the diagnosis. CASE REPORT - A 65 year old lady presented with neck swelling and complaints of difficulty in swallowing, following which radiological and cytological evaluation was done and diagnosed as an occult papillary carcinoma of thyroid with parapharyngeal space metastasis. She was treated surgically by total thyroidectomy with modified radical neck node dissection and excision of the parapharyngeal mass.

CONCLUSION - Ergo secondary parapharyngeal node metastasis from occult thyroid malignancy should also be considered and diagnosed promptly with aid of radiological and cytological evidences.

Keyword: occult thyroid malignancy, parapharyngeal metastasis

INTRODUCTION: Parapharyngeal space metastasis are rare and every case of parapharyngeal space metastasis also requires a thorough evaluation of the thyroid gland for occult thyroid malignancy, which persuades us to use a differential diagnostic view for betterment of the treatment outcome.

CASE REPORT: A 65 year old female came with complaints of snoring, difficult swallowing and diffuse bulge in right upper neck for a period of 4 months. On intraoral examination, a smooth bulge was seen to arise from right lateral pharyngeal wall behind the post pillar crossing the midline. On diagnostic nasal endoscopy, this smooth mucosa covered bulge was seen to extend up to nasopharynx. Clinically thyroid was normal. Ultrasonography confirmed a subcentimeter solitary nodule in right lobe of thyroid. Clinically thyroid was normal. Ultrasonography confirmed a subcentimeter solitary nodule in right lobe of thyroid. An ultrasonography guided fine needle aspiration from the thyroid gland proved out to be a papillary carcinoma thyroid. Subsequently parapharyngeal mass was diagnosed by peroral fine needle aspiration as a metastasis arising from the occult thyroid carcinoma. Patient was referred to surgical endocrinology for opinion and taken up for surgery. A total thyroidectomy with modified radical neck dissection was done. The mass was in parapharyngeal and retropharyngeal space extending up to skull base which was removed in toto preserving all surrounding major structures.

DISCUSSION: Parapharyngeal space is a potential space extending from skull base to the level of hyoid bone which is divided by styloid process with its muscle and fascia into prestyloid and poststyloid compartment. The prestyloid compartment includes fat and minor salivary glands which is related laterally to parotid gland while the poststyloid compartment contains carotid artery, jugular vein, sympathetic trunk, IXth, Xth, XIth and XIIth cranial nerves, major part of the internal maxillary artery and numerous lymph nodes. The common neoplasm arising from prestyloid compartment is almost always a pleomorphic adenoma or can be a minor salivary gland tumour. The poststyloid compartment tumours goes in favour of neurogenic tumours like paraganglioma, schwannoma and neurofibroma. Metastases to parapharyngeal
or retropharyngeal lymph nodes are rare in well-differentiated thyroid cancers. A review of English literature shows an incidence of parapharyngeal lymph nodes metastases ranging from 0.43 to 2.5% [1]. The possible explanation for metastatic deposits in parapharyngeal space from thyroid carcinoma are the presence of an ectopic parapharyngeal thyroid gland[2,3], direct extension from the superior pole of thyroid to the lower part of the parapharyngeal space through a narrow stalk along the neurovascular bundle[2,4], explanation by Rouviere’s anatomical pathway where lymphatic channel connects the posterior and superior thyroid lymph vessels to the retropharyngeal lymphatic system [1,2,5]. There exists a communication between the parapharyngeal and retropharyngeal spaces which permits a potential lymphatic spread from one space to another [2,6]. Being a rare presentation every case with a parapharyngeal mass requires a thorough examination of the thyroid gland as well. A simple cytological evaluation by fine needle aspiration from the parapharyngeal mass averts us from missing the diagnosis of occult thyroid malignancy [7]. After a complete radiological and cytological workup patient should be taken up for surgery appropriate to diagnosis.

**CONCLUSION:**
Presence of occult thyroid carcinoma should be considered as a differential diagnosis in a parapharyngeal mass in addition to other diseases, even if their occurrence is rare. Taking a fine needle aspiration cytology from the parapharyngeal mass after a radiodiagnostic approval should be implied as a diagnostic tool in every case for an accurate diagnosis and treatment plan.

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