

## **A Bolt from The Blue : Occult Thyroid Carcinoma Presenting As Parapharyngeal Mass**

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### **Abstract**

**Background:** The presence of ectopic thyroid tissue is a developmental disorder that affects about one per 100,000–300,000 people. It is extraordinarily rare for ectopic thyroid to lie outside its embryological path. This case is the first to report a papillary ectopic thyroid carcinoma in the parapharyngeal mass.

**Case Presentation:** 59-year-old male with nil comorbidities presented to our centre with painless growth in left lateral pharyngeal wall. Surprisingly histopathological report revealed papillary thyroid carcinoma in an aberrant thyroid appearing as a parapharyngeal mass.

**Conclusion:** Because this diagnosis extremely rare, the possibility of ectopic thyroid carcinoma in cases of parapharyngeal mass must always be carefully thought out. A high degree of suspicion is essential as the unusual presentation could take.

**Keywords:** Ectopic Thyroid Tissue, Papillary Thyroid Carcinoma, Parapharyngeal Mass.

### **Introduction**

An ectopic thyroid gland can lie throughout its embryologic path. It is situated in the foramen cecum and then slowly “descending” to its normal site, in the front of the neck, above the thyroid. Connection between the foramen cecum and normal thyroid is known as the thyroglossal duct. It normally begins to atrophy in the seventh week. Ectopic thyroid tissue is a congenital disease caused by abnormal migration of thyroid in the embryonic stage. Malignant ectopic thyroid tissue is often misdiagnosed as a cyst of the thyroglossal duct. Ectopic thyroid tissue is rare, with a reported incidence of 1 in 300,000. Ectopic thyroid parenchyma is most frequently reported in the lingual, thyroglossal and laryngotracheal sites<sup>1</sup>. Cases of ectopic thyroid tissue adjacent to the esophagus, heart, aorta and pancreas have also been described. To our knowledge, ectopic thyroid tissue in a parapharyngeal mass have not been published to date. We share our experience of the successful management of such a rare case.

### **Case Presentation**

We report a case in which a 59 year old male patient came to our center with a chief complaint of painless growth behind the

tongue which was slowly growing in nature since 2 years. He also complaint of difficulty while deglutition. On clinical examination of oral cavity and oropharynx using a flexible laryngoscope large smooth ovoid mass was noted which was 5 x 3 cm approx. in size, non-tender, fixed & firm in consistency in the right lateral pharyngeal wall.

### Investigations

MRI scan revealed a well-defined lobulated homogeneous soft tissue mass approx. 5.3 x 4.4 x 2.5 cm in retro and parapharyngeal space protruding in oropharynx causing luminal narrowing. Mass was displacing left parapharyngeal fat pad laterally and abutting prevertebral muscle, left internal carotid artery and left Internal jugular vein. Lesion had relatively hypointense peripheral incomplete rim represent pseudo capsule suggestive of submucosal soft tissue neoplasm. No significant neck nodes were reported. FNAC showed highly cellular epithelial cells clusters, hyperchromatic nucleus, increase N:C ratio suggestive of moderate to severe degree of squamous cell dysplasia.



Fig. 1: MRI revealed homogenous soft tissue mass in retro & parapharyngeal space protruding in oropharynx & abutting prevertebral M, IJV & ICA.

### Procedure

Pt was counselled regarding the procedure prior surgery. Preoperative work up was done. Horizontal incision was placed along the neck crease and joined superiorly to midline lower lip split incision. Subplatysmal flap raised superiorly up to the inferiorly border of mandible. Facial artery and vein was ligated and left submandibular gland was excised. Excision of the parapharyngeal mass was undertaken with access mandibulotomy approach. Intraoperatively tumor was adhered to the carotid artery. Fine dissection was performed to separate the tumor from artery. Hypoglossal nerve and branches of External carotid artery was sacrificed as they were encased by

tumour. Medial pterygoid muscle was rotated and filled to the defect. Mandibular fixation was done with two 4-hole with gap titanium miniplates & screws. Intraoperative and postoperative period was uneventful. Patient was discharge on postoperative day-5. Histopathology report was suggestive of papillary carcinoma thyroid in an aberrant thyroid /metastasis.



Fig. 2: Incision Marking.



Fig. 3: Excision of the parapharyngeal mass was undertaken with access mandibulotomy approach.

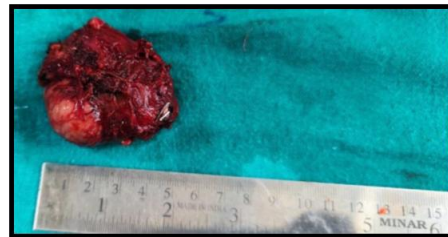


Fig. 4: Excised Main Specimen



Fig. 5: Mandibular fixation done

## **Discussion**

Ectopic thyroid tissue is a rare developmental abnormality. Its prevalence is about 1 per 100 000–300 000 people, rising to 1 per 4000–8000 patients with thyroid disease<sup>2</sup>. Ninety percent of ectopic thyroid tissue cases are found in the area of the foramen cecum as lingual thyroid, with other known anatomic areas including intratracheal, submandibular, oropharyngeal, esophageal, lung and other regions.<sup>3-5</sup> The most frequent location of ectopic thyroid tissue is at the base of tongue. Primary thyroid carcinoma arising from ectopic thyroid tissue are uncommon and have been reported to arise from thyroid tissue in thyroglossal cyst, lateral aberrant thyroid tissue, lingual thyroid, mediastinal and struma ovarii. In our case we have reported ectopic thyroid tissue in parapharyngeal space which is extremely rare entity. Most tumors in ectopic locations have been papillary carcinoma, mix papillary and follicular carcinomas or Hurthle cell tumor<sup>6</sup>. The presence or absence of orthotopic functioning thyroid tissue is the core of diagnostic and therapeutic interventions<sup>7</sup>. Although, in our condition, suspicion of malignancy indicates the total thyroidectomy along with compartmental clearance and bilateral neck dissection. Because of its different circumstances and rarity, there is no specific optimal treatment plan for ectopic thyroid tissue. As indicated in the literature, most malignant ectopic thyroid tissue is accompanied by a corresponding thyroidal and malignancy, and most are diagnosed incidentally after surgical excision. Surgical excision is the treatment of choice, with selective or modified radical neck dissection in the rare case of thyroid carcinoma with metastatic lymphnode.

## **Conclusion**

The majority of cases are asymptomatic, but symptoms related to tumor size and location may develop, as well as primary thyroid malignancy. Thyroid scintigraphy plays an important role in establishing more accurate diagnosis. Surgery is the treatment of choice in symptomatic cases, with a role for radioiodine ablation in recurrent disease. Surgeons should be aware of the existence of an ectopic thyroid gland in unusual locations. They should always take into account the potential

of this rare entity and differentiate it from other masses in the neck and distant sites.

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