

Case Report

When you hear hoof beats, it may also be a Zebra: a case report in a malignancy glottis

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ABSTRACT

Laryngeal cancer is one of the leading causes of death in Indian males. Papillary thyroid carcinoma is the most common subtype of thyroid cancer in 80% of cases and has a tendency to metastasize to lymph nodes. Patients with laryngeal cancers undergoing laryngectomy might have other occult primaries including thyroid carcinoma especially in patients with recurrent laryngeal carcinomas. We report a case of recurrent laryngeal carcinoma with incidental carcinomas. This study was conducted at TATA medical center, Kolkata.

Keywords: Recurrent carcinoma larynx, Thyroid carcinoma, Lymph nodes

INTRODUCTION

The most common head and neck cancer after thyroid cancer is laryngeal cancer, according to the statistical data obtained from the Korean National Cancer Center in 2013.¹ Laryngeal cancer is one of the leading causes of death in Indian males.² There is a well-established association of laryngeal cancer and smoking. Alcohol indirectly increases the incidence of laryngeal cancer. Radiotherapy is the mainstay of treatment in early laryngeal cancer and laryngectomy is the treatment of choice for T4 laryngeal cancers.³ Recurrent laryngeal cancer is difficult to manage, however, the various treatment options available are salvage laryngectomy, laser cordectomy in selected cases and very rarely reirradiation which is limited because of abnormal tissue tolerance.⁴ Of the different types of carcinomas in thyroid, differentiated papillary thyroid cancers (PTC) accounts for 85% in iodine insufficient region.⁵ Papillary micro carcinoma (PMC) is defined as a papillary thyroid carcinoma measuring ≤ 10 mm in the greatest dimension, and accounts for 30% of all PTC. The incidence of

papillary micro carcinoma found in autopsy studies suggest that they are benign and slow growing.⁵

CASE REPORT

Case report 1

A 65 years old gentleman presented with history of persistent hoarseness of voice for 2 months. He was a known case of carcinoma glottis, diagnosed in 2016 and had received adjuvant radiotherapy of 66 Gy in 33#. He has been on regular follow up since then. He presented with persistent hoarseness of voice. Whole body PET scan was done which showed soft tissue thickening in the midline below the thyroid lamina. There was no significant cervical lymphadenopathy. In addition, the PET scan also showed prominent mediastinal and left supra clavicle nodes, largest measuring 1.7x0.7 cm and a right lower paratracheal node. An ultrasound thyroid was also advised as non-PET avid nodules were noted on the CT scan.

Ultrasound thyroid showed bilateral thyroid nodules with benign ultrasound features (TIRADS II) with right level

II and IV lymphadenopathy and midline prelaryngeal nodule at the thyroid suggestive of recurrence. Hence FNAC was done from the midline nodule in the thyroid and right level II and IV lymph nodes. The nodule was reported as poorly differentiated carcinoma, the thyroid nodules as BETHESDA II, and the lymph nodes as reactive lymphadenitis.

Examination under anesthesia was done to confirm the recurrence. Biopsy was reported as invasive keratinizing poorly differentiated squamous cell carcinoma. He was then counseled for surgery.

Total laryngectomy with total thyroidectomy and bilateral selective neck dissection was done and specimen sent for histopathological analysis. It was found to be moderately differentiated squamous cell carcinoma. The tumour was found to invade the thyroid cartilage and involving the paraglottic space. All lymph nodes were reported as negative for malignancy.

Thyroidectomy specimen showed papillary micro carcinoma in the right lobe of the thyroid gland, measuring 0.6 cm in greatest dimension with no extra thyroidal extension and left lobe of the thyroid gland showed a colloid nodule with papillary hyperplasia.

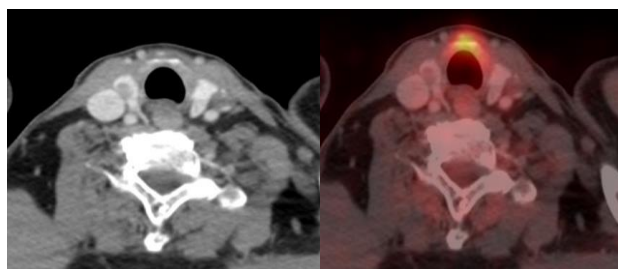


Figure 1: Axial FDG PET-CT fusion and axial CECT sections of neck show a non-FDG avid and hypo enhancing nodule in right lobe of thyroid. Also seen is region of increased uptake at anterior aspect of cricoid.

Case report 2

A 73 years old man, presented with persistent hoarseness of voice. He had a history of microlaryngoscopy done another ENT surgeon in 2018, which was reported as verrucous hyperplasia with mild dysplasia and the slide was reviewed by another laboratory and reported as squamous cell carcinoma. He then received 66 Gy in 33# and he had been on regular follow up. Despite the treatment, his symptoms worsened. Repeat micro laryngoscopy and biopsy was done by the same surgeon and biopsy was reported as negative for malignancy or dysplasia.

Fiber optic laryngoscopy done showed a keratotic lesion in the anterior commissure extending to the subglottic region with normal vocal cord mobility.

Microlaryngoscopy and biopsy showed invasive squamous cell carcinoma. Whole body scan was done which shows incidental FDG avid asymmetric polypoidal intra vesical mural lesions 2.08×1.6 cm with SUV max 19.7 involving left posterior urethral valve at the level of left vesico urethral junction.

Total laryngectomy and bilateral neck dissection (II-IV) with Trans urethral resection of the bladder tumour (TURBT) was done and thyroid was not addressed in view of absent cartilage invasion and extra laryngeal spread in the PET scan and histopathology was reported as moderately differentiated invasive keratinizing squamous cell carcinoma. Tumour involved the paraglottic space and extended to the cricothyroid membrane to involve the soft tissue of the neck with perineural invasion. There was no evidence of cartilage invasion. One out of three lymph nodes showed a scanty deposit of metastatic carcinoma, favoring papillary thyroid micro carcinoma. IHC was attempted to confirm, however tumour was depleted in IHC slides.

Tissue from the urinary bladder showed papillary urothelial carcinoma, low grade. There was no invasion of lamina propria. Since it was a low grade papillary urothelial carcinoma, patient was advised to keep it under follow up with cystoscopy every 3 months for 2 years.

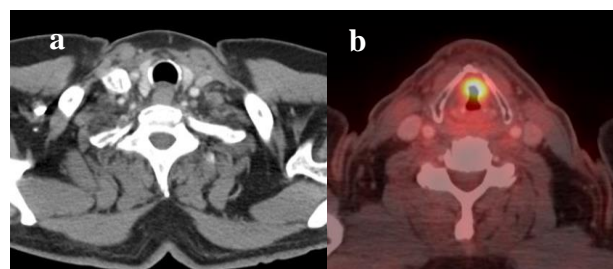


Figure 2: a) Axial CECT image of neck - normal bilateral lobes of thyroid without any focal nodule, b) FDG PET-CT images of neck show thickening of anterior commissure with increased FDG uptake extending to both vocal cords.

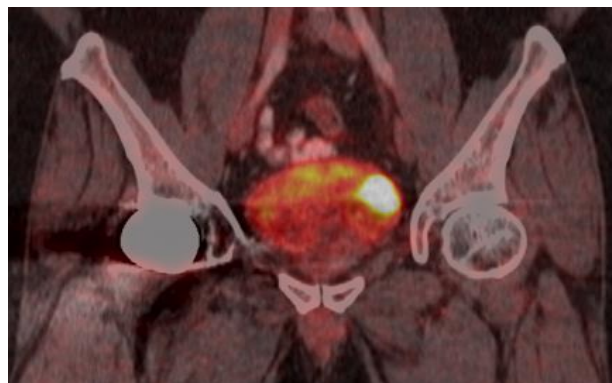


Figure 3: Coronal reformatted PET-CT image of pelvis shows an FDG avid polypoidal intraluminal lesion arising with left lateral wall of urinary bladder.

DISCUSSION

Papillary thyroid carcinoma is the most common subtype of thyroid cancer in 80% of cases and has a tendency to metastasize to lymph nodes.⁶

Both the cases were done in TATA medical center, Kolkata. The study discussed were recurrent carcinoma glottis. The PET scan in the first case showed nodules in both lobes of thyroid. Hence, a decision to do total thyroidectomy along with the total laryngectomy and neck dissection was made. Preoperative ultrasound and FNAC from the thyroid showed a TIRADS II lesion with benign ultrasound features and BETHESDA II lesion on FNAC. Based on this report there was no necessity to do thyroidectomy, however in view of the extra laryngeal spread on the PET scan, a plan for thyroidectomy was made. Final histopathology was reported as papillary micro carcinoma. Then the question of radio iodine ablation arises. According to the 2015 American thyroid association (ATA) management guidelines for thyroid nodules and differentiated thyroid cancer (intra thyroidal, N0), comes under low risk which does not require radio iodine ablation. Hence, we planned to keep him under follow up.

Second patient with carcinoma glottis shows incidental PET findings of asymmetric polypoidal intra vesical mural lesion 2.08×1.6 cm involving left posterior urethral valve at the level of left vesico urethral junction. The laryngeal lesion was limited, without any extra laryngeal extension; hence we decided not to do total thyroidectomy. However, the final histopathology showed a scanty deposit of metastatic carcinoma in one out of three lymph nodes, favoring papillary thyroid micro carcinoma. In view of the morbidity associated with repeat surgery in a salvage laryngectomy patient and the slow growing nature of thyroid cancer, a decision was made to keep the thyroid disease on close observation.

CONCLUSION

Patients with laryngeal cancers undergoing laryngectomy might have other occult primaries including thyroid carcinoma especially in patients with recurrent laryngeal carcinomas.⁷ In our two cases PET scan was done preoperatively to identify the second primary does not shows any FDG avidity in the thyroid but final histopathology was reported as papillary thyroid carcinoma. It is a well-known fact that exposure to

ionizing radiation is a known risk factor of thyroid cancer. Thus, it is prudent to do a total thyroidectomy in all patients with recurrent carcinoma who already received radiation therapy. When you hear hoof beats, it is not necessarily a horse hoof alone. It may also be a zebra. So, we conclude that patient with recurrent carcinoma might also have second primary carcinomas which needs to be judiciously evaluated before surgery to avoid second surgery.

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