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Papillary Thyroid Carcinoma Presenting as Fungating Cutaneous Mass

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Abstract

Papillary Thyroid Carcinoma (PTC) is the most common type of thyroid malignancy making up to 70-80% of all thyroid malignancies. PTC presenting with extrathyroidal cutaneous fungating mass is unusual. We report the management of a neglected fungatingPTC in a 70yr old female. After thorough preoperative evaluation,she underwent total thyroidectomy with en-bloc resection of the fungating mass along with adequate skin margin and ipsilateral selective neck dissection. Postoperative period was uneventful.

Keywords: Papillary carcinoma thyroid,cutaneousfungating mass.

Introduction

Papillary Thyroid Carcinoma (PTC) is the most common thyroid malignancy. PTC is often multifocal and metastasizes to regional lymph nodes in about 40% of cases. Distant metastasis of PTC is rare and usually involves the lungs, liver, bones, and brain. Cutaneous metastases occur in 0.6-10.4% of all patients with cancer and represent 2% of all skin tumours.[1] Papillary thyroid carcinoma is a slow growing neoplasm which explains the relatively long duration until a diagnosis is established. Appropriate early surgical treatment decreases the risk of metastasis and recurrence. We report the management of a very rare case of neglected papillary carcinoma thyroid presenting with cutaneous fungating mass.

Case report

A 70yrs old female patient was referred to our OPD with complaints of long standing neck swelling since 15yrs which developed into a fungatingmass 3weeks prior to presenting at our OPD. It is associated with ocassional bouts of bleeding for which she presented to us.

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No other symptoms of pain, difficulty in swallowing, hoarseness of voice or dyspnea noted (Fig. 1).

On further evaluation FNAC done suggestive of papillary carcinoma. Biopsy from the fungating mass done suggested the same. IDL showed normal vocal cords. CT neck suggestive of mass arising from left lobe of thyroid with enlarged lymphnodes without tracheal and carotid sheath infiltration. Patient was anaemic so 1unit of packed cells are transfused preoperatively and 2 units are kept as reserve. After thorough cardiopulmonary evaluation and discussing with our anaesthesia team, Patient was posted for surgery after explaining the procedure and risks associated to the patient and his attendents. An elliptical neck incision was made, taking the entire fungating mass together with a good healthy skin margin. Intraoperative findings revealed that the fungating mass arising from left lobe of thyroid, there is no infiltration to the strap muscles and sternocleidomastoid. Carotids and IJV are not involved. Ipsilateral central neck node dissection done. Bilateral RLN are preserved. The skin cover over the defect in lower neck was maintained after mobilizing the local skin flap (Fig 2 & Fig 3). The histopathology report confirmed the diagnosis of papillary thyroid carcinoma. Postoperative vocal cord assessment revealed no obvious palsy of the vocal cords. The patient underwent radioiodine ablation therapy 4 weeks later.

Fig1: Fungating Thyroid Cancer

Fig 2: Lesion at the time of Surgery

Fig 3: Immediate Post-operative progress

Discussion

PTC is the most common malignancy of thyroid gland. Well-differentiated PTC has an excellent prognosis, with a 5-year survival rate of greater than 97%.[2]Extrathyroidal extension is seen in 4 to 16 percent of cases and carries with it an increased risk of disease recurrence and reduces overall survival rate.[3]Extrathyroidal extension involves invasion of trachea, oesophagus, recurrent laryngeal nerve, strap muscles and skin. Cutaneous metastasis from thyroid carcinoma is rare. It usually occurs in the setting of disseminated neoplastic disease. [4] Dahl et al reviewed the English literature from 1964 onwards and found 43 cases of thyroid carcinoma with skin metastases. They found that papillary carcinoma was the most common thyroid cancer to result in skin metastases, representing 41% of cases, followed by follicular carcinoma at 28%, with anaplastic carcinoma and medullary carcinoma each contributing 15% of cases.The scalp is the most frequent cutaneous site of metastasis from carcinoma thyroid. The other cutaneous sites involved with lesser frequency are the

cheeks, shoulders, arms, abdomen, and thighs. Cutaneous metastases may either be the initial manifestation of thyroid carcinoma or can be the first evidence of recurrence of thyroid carcinoma. The skin metastasis of PTC is mostly associated with aggressive and disseminated disease and shows a poor outcome, especially when associated with BRAFV600E mutations.[4,5,6] A progressive loss of differentiation is usually found in these tumors, leading to a loss in their iodine concentrating ability,thereby making them unresponsive to radioiodine therapy.

Large fungating thyroidal masses are extremely rare and present a unique challenge to surgeons. These large masses often present in close proximity to or may involve a number of critical anatomical structures. Hence, before contemplating surgery, it is essential to perform a thorough work-up and assessment of the relevant anatomy and pathology. Most important in the preoperative diagnostic evaluation is to exclude anaplastic thyroid cancer, which has a dismal outcome and prognosis. PTC has favourable outcome even with cutaneous involvement.

A total thyroidectomy along with complete resection of the cutaneous mass and removal of the involved structures including cervical lymph nodes, followed by radioiodine ablation is the accepted management of PTC with extrathyroidal extension. Fujimoto Y et al. performed aggressive radical resection on 18 of 21 elderly patients with locally invasive-papillary carcinoma of the thyroid and advocated aggressive resection for control of locally advanced, differentiated carcinoma of the thyroid.[7] Skin loss can either be closed primarily as in our case, or may require a flap.[8] In the experienced hands, permanent complications such as recurrent laryngeal nerve injury and hypoparathyroidism occurs at a rate of less than 2%.[9]

Conclusion

In conclusion large fungating thyroid carcinoma remain a unique challenge to surgeon and requires a thorough preoperative evaluation and work-up as each case differs from others. Surgery should address the primary disease, cutaneous spread, the nodal involvement and the involvement of the adjacent extrathyroidal structures. Post-operative radio-iodine ablation and suppressive doses of thyroxine and regular follow-up are also essential.

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