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Case Report

Primary Squamous Cell Carcinoma of Thyroid

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Abstract

Background: Primary squamous cell carcinoma (PSCC) is a rare thyroid cancer that is difficult to diagnose and differentiate before pathology changes observed, poor prognosis, aggressive malignancy associated with locally advanced disease and frequent metastases to regional lymph nodes and distant sites.

Case Presentation: A 76-year-old female patient complained about a rapidly growing anterior neck mass and a change in her voice. Based on the patient's symptoms, clinical examination, neck and thyroid ultrasound with fine needle aspiration cytology, the patient was initially diagnosed with suspicious thyroid nodule thereafter, total thyroidectomy with left neck node dissection. However, her

disease was finally diagnosed according to the histopathology result as Primary squamous cell cancer (PSCC).

Conclusion: Primary squamous cell cancer (PSCC) of thyroid are poor prognosis when associated with locally tissue infiltration and infected necrosis, the proper history, good neck and thyroid examination support by neck sonography help full to diagnosis the thyroid malignancy in general, the best treatment for Primary squamous cell cancer (PSCC) was total thyroidectomy with or without lymph node dissection followed by radio- chemotherapy.

Keywords: Thyroid cancer, squamous cell carcinoma thyroid

1. Introduction

Primary squamous cell cancer (PSCC) of thyroid is a rare malignancy with poor prognosis. It is mandatory to exclude secondary involvement of the thyroid by pan endoscopy, CT-scan and immune histochemical analysis [1, 2]. Primary squamous cell carcinoma of the thyroid that is difficult to diagnose and differentiate. There is no consensus for the early clinical, radiological, or ultrasonic identification of primary thyroid squamous cell cancer before pathological changes are observed in patients. There are no standardized guidelines for treating primary thyroid squamous cell cancer because of its rarity, but surgery, radiation and rarely chemotherapy is employed. However Primary squamous cell carcinoma (PSCC) of thyroid was poorly prognosis with poorly response to management [1-4].

We report a case of Primary squamous cell carcinoma of the thyroid that was successfully treated with aggressive locoregional resection followed by radio chemotherapy. This patient despite the cancer was locally advance with infected necrosis and lymph nodes metastasis The patient remains free of disease more than 11month after surgery.

2. Case Presentation

A 74-year-old woman presented with a painless anterior neck swelling for 4 months. It was progressively increasing in size and was associated with gradual reduction in the appetite and weight loss within this period of time. 2 months prior to the presentation, the patient noticed that her voice started to become hoarse. But for one month start general lethargic and mild pain at neck. She had 20 years history of chowing tobacco but no history of neck irradiation or family members with thyroid cancer or any kind of malignancy. During physical examination, she appeared to be mild cachexic. There was a palpable thyroid nodule on the right lobe measuring about 4cm x 3 cm that was hard in consistency and left upper cervical lymph n nodule about 3cm x 2 cm. the trachea was not deviated but narrow (Figure 1), however, the normal laryngeal crepitus sign was absent.

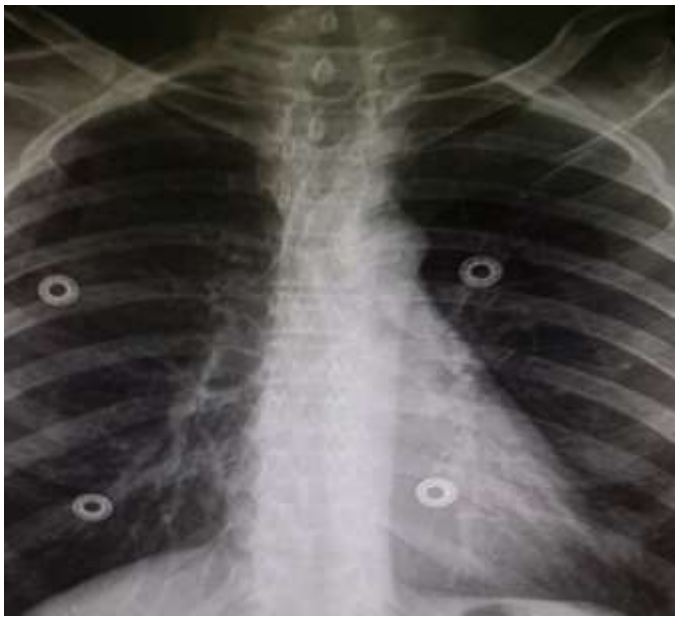

Figure1: Chest X.ray before operation show normal chest with mild trachea narrowing.

Neck ultrasound revealed the presence of a thyroid mass involving bilateral thyroid lobes complex cystic and solid nodule the largest one about 3cm x 1.5 cm at right lobe with vascular flow and calcification. There is pathological rounded shaped lymph node enlargement at left upper and middle deep cervical lymph node groups (suspicious). Fine needle aspiration for cytology (FNAC) revealed cytology consistent with suspicious thyroid nodule. Patient prepare for operation, ENT Doctor Consultation Nasoendoscopy finding was unremarkable, while laryngoscopy revealed right vocal cord palsy in paramedian position. Computer tomography and pan endoscopy was not don before operation.

Thyroid function test normal, chest x ray normal (Figure 1) with no evidence of lung metastases. Patient Hb 11.5, WBC 9500, ESR 50, Creatinine 0.7, calcium 8.2 Otherwise, no other features from the imaging could suggest the primary site of the lesion. High risk consent for operation was taken. Total thyroidectomy with left side lymph node dissection was successfully performed and sent for histopathology, (Figure 2), Intra operatively, there were hard fixed nodule, mainly right side with right recurrent laryngeal nerve infiltrated with tumor with locally infiltrating area with necrotic tissue offensive thick pus collection extend from right lower lobe between trachea and esophagus. After swab taken for culture and sensitivity, remove that necrotic tissue and washing by saline and good hemostasis and removac drain was inserted. Operation time take about one hour, patient transfer to recovery room was extubated successfully.

Figure 2: Total Thyroidectomy with Right thyroid nodule.

Figure 3: Chest X. Ray post operation with soft tissue infection with emphysema.

Figure 4: post operation aggressive surgical site infection.

Next day post operation patient stable, same voice hoarseness as before operation, no sign of hypocalcemia, with mild dysphagia. Third day and fourth day start swelling at sit of operation with crepitus (emphysema) wound open with air sound came, patient sill stable with oxygen saturation 95 air room, (Figure 3)(Figure 4). we do local wound washing and dressing and continues conservative treatment, result of culture was moderate growth of pseudomonas bacteria sensitive to tienam (Imipenem/cilastatin) and ciprofloxacin continue for two weeks, follow up patient improve clinical and Para clinical but result of histopathology was squamous cell carcinoma infiltrating thyroid gland with left upper cervical lymph node metastatic deposits (4/7) (Figure 5).

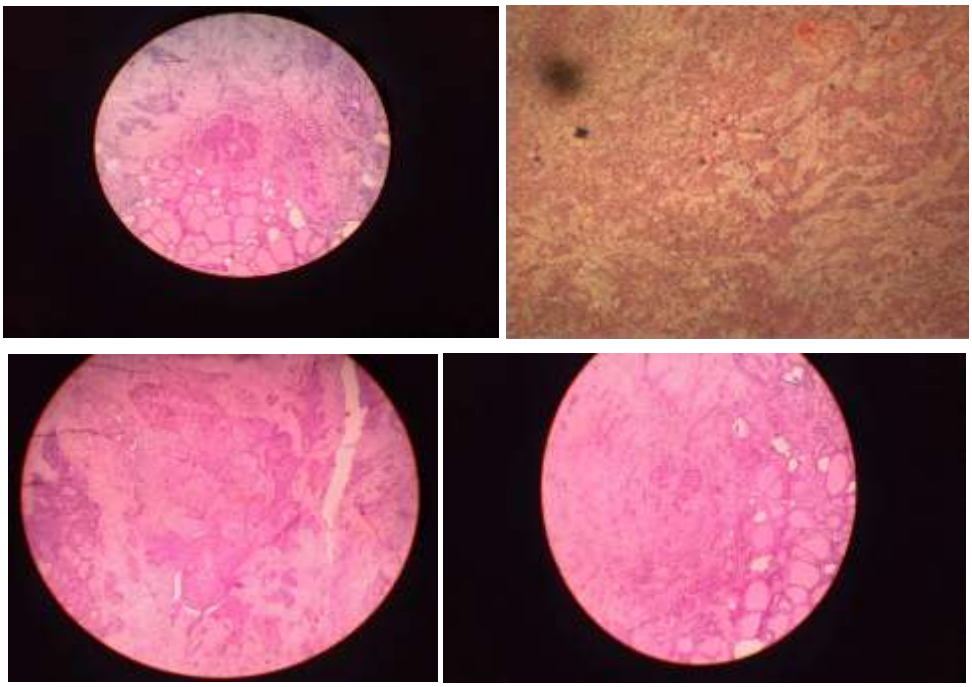

Figure 5: Histopathology Show Invasive Squamous Cell Carcinoma Infiltrating Thyroid Gland These Malignant Cells with Large, Prominent Hyper chromatic Pleomorphic Nuclei.

Computer tomography and pan endoscopy was carried out post-operative with a negative finding. Third week post operation we send patient for oncology center for further evaluation and management there underwent for Radiotherapy and chemotherapy. Until now about 11month patient still survival with continue follow-up, during that period she admitted several times for recurrent chest infection, blood transfusion and other support treatment.

3. Discussion

Primary squamous carcinoma of thyroid has low incidence representing less than 1% of all primary carcinomas of the thyroid gland <1%, women more common effected with average age 60-70 years old (1,2,3,4), due to rarity of this tumor, less than 85 cases worldwide diagnosed as Primary squamous carcinoma of thyroid [5]. An incomplete descent of the thyrog lossal duct cyst or remnant the thymic epithelium from the third branchial cleft was interpretation present of squamous cell in thyroid tissue also metaplasia and neoplastic change that occurred due chronic thyroid inflammation result either environmental stimuli or thyroid pathology lead to excessive differentiation (metaplasia and neoplastic change) to make formation Squamous carcinoma of thyroid [6, 7, 8].

Squamous cell carcinoma of the thyroid gland can manifest as secondary metastasis lesion, in which it could be due to a direct extension of adjacent lesions or metastasis from other primary foci, the secondary squamous carcinoma are 10-times more common than Primary squamous carcinoma of thyroid. However, compared to all thyroid malignancies,

the incidence of metastatic thyroid disease is low, about 2-3%, despite rich vascular supply [5, 9, 10].

Primary Squamous cell carcinoma of the thyroid, it is best for the managing team to get an early and accurate diagnosis of the disease, it is possible to differentiate between primary and secondary thyroid squamous cell carcinoma, on the basis of combined evidence from clinical examination and endoscopic, pathological and radiological evaluation. The role of fine needle aspiration cytology (FNAC) in diagnosing squamous cell carcinoma of the thyroid is also very limited. More than half of the cases were either reported as papillary carcinoma or non-diagnostic. Paradoxically, FNAC results did show high-grade features in 40% of cases. With this in mind, high-grade FNAC findings, when combined with clinical and radiological findings, could provide important hints towards primary squamous cell carcinoma of the thyroid [5, 9]. Fine needle aspiration cytology (FNAC) is prone to missed diagnoses of Primary squamous carcinoma of thyroid. A meta-analysis concluded that the positive predictive value of FNAC for Primary squamous carcinoma of thyroid may be less than 0.33, whereas fine needle aspiration cytology (FNAC) yielded a misdiagnosis of papillary thyroid carcinoma or non-diagnostic lesions in more than 50% of patients with Primary squamous carcinoma of thyroid. The insensitivity of FNAC may be attributable to squamous cell carcinoma cellular adhesion resulting from fibrosis and cytoplasmic interstitial reaction, leading to the failure of FNAC to obtain tumor cells. Another factor may be sampling errors caused by the cellular heterogeneity of squamous cell carcinoma. The histopathologic diagnosis of Primary squamous carcinoma of thyroid requires the microscopic identification of keratin or intercellular bridge structures [5].

Due to Rapid spread and aggressive tumor nature make primary squamous cell carcinoma of thyroid with bad prognosis and Carry poor overall survival rate, regardless of the treatment use [5, 11]. Cho et al reported a 3-year survival rate of 43.1% of cases where complete resection was performed compared to 15.9% of cases where incomplete resection was performed. Surgical resection of the tumor with adjuvant radiotherapy and chemotherapy is the recommended option [5, 12, 13] in advanced stage diseases, the extensive and invasive nature of the squamous cell carcinoma may prove to be the main factor of surgical failure (5). Moreover, primary squamous cell carcinoma of the thyroid is also relatively resistant to radiotherapy [5], while chemotherapy has shown minimal to absent response towards the disease [12].

Cho et al [5] concluded in a meta-analysis of 89 patients that complete resection was the only prognostic factor in multivariate analysis, and adjunctive therapies did not confer significant benefits. In the absence of distant metastases, local resection can be attempted. Local radiotherapy or neo adjuvant radiotherapy should be considered for non-respectable disease. [14] The role of postoperative adjuvant chemotherapy is controversial, and this treatment is often ineffective. (15). As other well differentiated thyroid cancer, primary squamous thyroid cancer can present with solitary or multi nodule goiter [16, 17].

4. Conclusion

Even it is difficulty but are possible to differentiate between primary and secondary thyroid squamous cell carcinoma, on the basis of combined evidence from clinical examination and endoscopic, pathological and radiology

evaluation. Knowing the aggressive nature and the poor outcome of primary squamous cell carcinoma of the thyroid, it is best for the managing team to get an early and accurate diagnosis of the disease, which can lead to a more complete tumor eradication thus resulting in a more favorable outcome.

Declaration of Patient Consent

I obtained verbal consent from patient, that was understand like this publishing help to improve medical scientific activities in our country also I explained for the patient that name and identity will not be published.

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Nil

Conflicts of Interest

There are no conflicts of interest

Human Rights Statement

All procedures were conducted in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

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