The primary squamous cell carcinoma of the thyroid gland

Tiroid bezinin primer sküamöz hücreli karsinomu

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Abstract

The primary squamous cell carcinoma (SCC) of the thyroid gland is a very rare malignity. It is a very aggressive tumor, and its prognosis is extremely bad. Generally it grows fast and applies pressure on the surrounding tissues producing symptoms such as hoarseness and difficulty in swallowing. The suggested treatment, after the diagnosis, is R0 surgical resection if possible. After this treatment, the adjuvant treatment protocol and its benefits are still controversial. In this article, we will introduce a 68-year-old primary thyroid gland squamous cell carcinoma case.

Key words: Primary, squamous cell cancer, thyroid gland

Özet

Primer squamoz hücreli karsinom tiroid bezinin oldukça nadir görülen bir malignitesidir.Oldukça agresif bir tümör olup prognozu kötü seyretmektedir.Genellikle hızlı büyümektedir ve bunun sonucunda çevre organ ve dokulara bası semptomları ile karşımıza çıkmaktadır. Tedavisinde mümkünse tanı sonrası R0 cerrahi rezeksiyon yapılmalıdır.Cerrahi sonrasıadjuvan protokol hala tartışmalıdır.Bu vakada 68 yaşında, primer tiroid bezi squamoz hücreli karsinomu vakasını sunacağız.

Anahtar kelimeler: Primer, sküamöz hücreli kanser, tiroid glandı

Abstract

The primary squamous cell carcinoma (SCC) of the thyroid gland is a very rare malignity. It is a very aggressive tumor, and its prognosis is extremely bad. Generally it grows fast and applies pressure on the surrounding tissues producing symptoms such as hoarseness and difficulty in swallowing. The suggested treatment, after the diagnosis, is R0 surgical resection if possible. After this treatment, the adjuvant treatment protocol and its benefits are still controversial. In this article, we will introduce a 68-year-old primary thyroid gland squamous cell carcinoma case.

Introduction

Squamous cell carcinoma is responsible for less than 1% of the thyroid gland carcinomas, and is an extremely rare malignity. It is known as an aggressive tumor with its extremely bad prognosis, and is reported less in the international literature[1]. After the diagnosis, the average life expectancy is reported as 6 months[2]. It may cause symptoms like hoarseness and difficulty in swallowing. The suggested treatment in such cases is, if possible, the R0 resection; and if the tumor cannot be taken out, palliative surgery with R1 or R2 resections. Afterwards, chemotherapy or radiotherapy are recommended[2]. In this study, we report a 68-year-old patient who admitted to endocrınology department with a sudden and fast growing mass on his neck. Final diagnosis was squamous cell carcinoma of thyroid gland.

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Case Presentation

Sixty-eight years old female patient, who was known to have multi-nodular goiter history for 4-5 years, admitted applied to Endocrinology department with a painless rapidly enlarged mass in her neck and compressive symptoms idue to mass. which she noticed the past 3 months ago . She was clinically euthyroid and had a palpable right lobe (grade IB) associated with a probable 4 cm nodule in the right lobe. The rest of physical examination was unremarkable. Her thyroid function tests were within normal ranges.Throid ultrasonography reveoled multiple nodule was in both lobes. The dominant nodule was in the right lobe (40x50x40 mm) a hypoechogenic heterogeneous and macrocalcification. There was also multiple lymph nodes in both jugular and submandibular area of the neck. The Fine needle Aspiration biopsy (FNAB) from the dominant nodule was negative for malignancy. She underwent total thyroidectomy because of multinodular goiter. Intraoperatively right lobe of the thyroid and the nodule were firm and right lobe was adhering to trachea, carotid artery and sternocleidomastoid muscle. Total thyroidectomy was performed.Histopathology reveoled ***(Figure 1 and 2, 3)*** squamose cell carcinoma of the thyroid gland. The patient was discharged upon the recommendations of the relevant departments on the postoperative 1st day without respiration and voice complications. The patient was followed by oncology department and was planned 4 cure chemotherapy (cetuximab, cisplatin and 5-flurourasil protocol). The patient is on the postoperative third month now, and has received third chemotherapy and is still being followed by the Oncology Department. No metastasis was observed.

Discussion

Primary SCC of the thyroid gland is extremely rare with an incidence of less than 1% of all thyroid malignancies[1,3]. The number of the cases reported in the literature is very low[4]. Cho et al.[4] conducted a meta-analysis 1981 and 2012 and reported only 89 cases. The behaviour of tumour is aggressive its prognosis is extremely bad[5]. The primary squamosal cell carcinoma of the thyroid gland generally seen in the 5th and 6th decade generally reported in patients with Hashimoto thyroiditis. In our case pathology also revealed Hashimoto thyroiditis. Most reported cases were presented with rapidly enlarged neck masses mand with compression symptoms. Cervical lymph node metastatis was also frequent[6]. The Fine needle Aspiration biopsy (FNAB) of our patient was benign, and ultrasonography did not reveal cervical lymph node. Since the exact diagnosis could be made after surgery with pathological examination. The predictability of FNAB is low in the diagnosis of primary SCC. Though in most cases final pathological diagnosis is confirmed with comperehensive pathologic review and immunohistochemistry.

In our case, preoperative FNAB was performed in an external medical center and the case was assessed as benign, therefore we did not demand any scanning images in this period. No metastasis was observed according to the radiological scanning in the postoperative follow-ups. Symptoms like hoarseness stemming from invasion and difficulty in breathing may occur. Unfortunately the diagnosis can be made during the operation or in the postoperative period. In our case, there were pressure symptoms due to the sudden growth of the tumor, and we observed invasions in the surrounding structures during the operation.

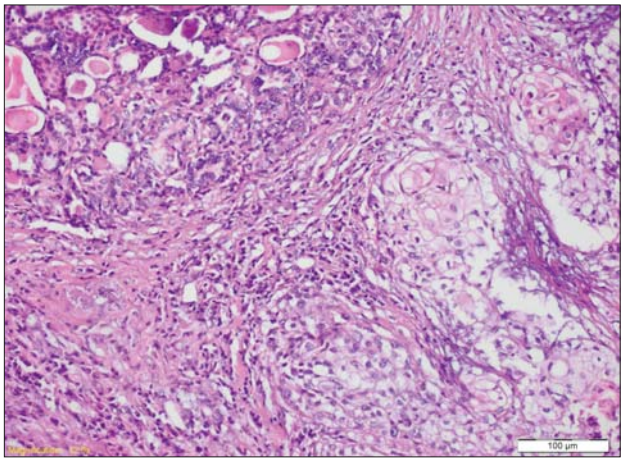

Figure 1. The tumor consisting of squamosal cell islets (x20, HE)

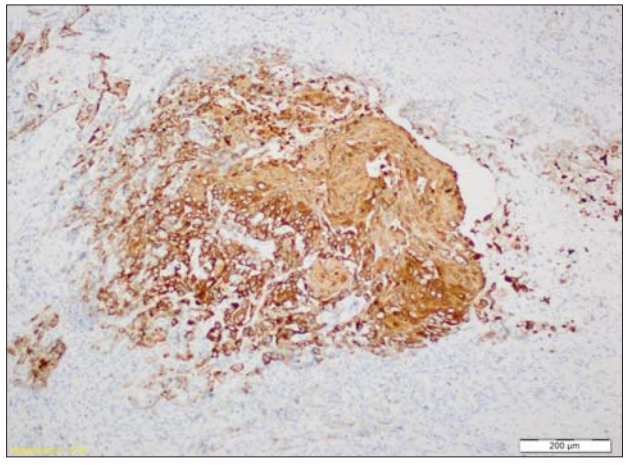

Figure 2. Staining is observed in areas related with p63 (x10, p63)

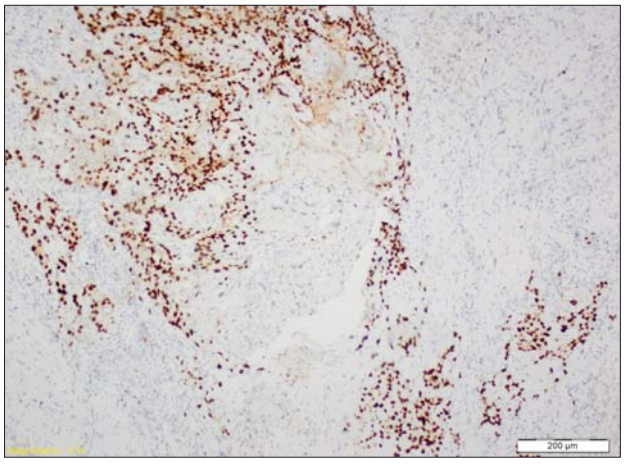

Figure 3. Staining is observed in areas related with cytokeratin 5/6 (x10, CK5/6)

Anaplastic carcinoma of the thyroid, lymphoma, thymus related carcinoma and metastasis from adjacent organs in head and neck area must be considered in differantial diagnosis. Since the thyroid gland normally does not have squamous epithelium, the etiology of the primary squamosal cell carcinoma of the thyroid gland is not known completely[6,7]. Three theories have been suggested regarding etiology. First, the embryonic nest theory suggests that the squamous cells are derived from the remnants of thyroglossal duct or the epithelium of the thymus. Secondly, the metaplasia theory suggests that these cells present as a result of inflammation and Hashimoto's thyroiditis[8]. Thirdly, the de-differentiation theory suggests that existing papillary, follicular, medullary and anaplastic thyroid carcinoma de-differentiate into SCC[9].

Since the rarity of the disease there is not any consensus on the treatment. Although the main treatment of the primary thyroid gland squamosal cell carcinoma is surgical excision, modality of the surgery depends on the stage of the disease[2]. After surgery chemotherapy and radiotherapy can be added to the treatment process as alternatives. However, it has been observed in many studies that SCC is resistant to radiotherapy and poorly responds to chemotherapy[5,10]. Therefore, the extent of surgical resection is considered as the main process affects the survival[11]. Complete surgical resection in patients with trachea and carotid invasion is impossible in such cases and the prognosis is worse and the average life expectancy in these patients is shorter[12]. Sapadilis et al.[2] reported that their case was a patient who had a metastasis to the mediastinum adenoids and without invasion to the surrounding structures, they could perform R0 resection, and they applied chemotherapy and radiotherapy protocol afterwards. However, despite the R0 resection, the mediastinal and paratracheal lymph nodules pressed on the trachea due to the bad prognosis of the tumor, and the patient had to receive tracheostomy in the following years. In our case, the tumour was invaded to trachea, carotis and surrounding muscles, we could not do complete surgical resection, and for the remaining tissue the patient had adjuvant chemotherapy.

As a conclusion the primary squamosal cell carcinoma of the thyroid gland is extremely rare. It is known as an aggressive tumor with bad prognosis.Complete surgical resection is the best option for treatment. The adjuvant chemotherapy and radiotherapy are still controversial but must be considered in patients with advanced disease[2].

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