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Case Report

Unusual Presentation of Papillary Thyroid Carcinoma: Skin Metastasis, Necrosis, Bleeding and Ulceration on the Neck Skin

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Abstract

Skin metastasis, neurosis and bleeding from of Papillary Thyroid Carcinoma (PTC) are rare. Here, we present one case of skin metastases, neurosis and bleeding of PTC are. The patient was females with 75 years old. The patients were admitted to the hospital with a, neurosis and bleeding on anterior-inferior of neck region. Free T3, T4 and TSH levels were in normal range. The patient seven year before this time underwent Fine Needle Aspiration Biopsy (FNAB) with diagnosis of papillary thyroid cancer and she refuse any treatment. During six years, the patient lived without evidence of any complication but the neck mass was larger and growth downward to the chest disease and floating. In this stage the color of skin in the floating portion was black, necrotic and prone to bleeding. Thyroid ultrasonography and computer-tomography neck of patients showed hypoechoic nodules with central vascularization and cystic change. Fine Needle Aspiration Biopsy (FNAB) taken from patients was papillary carcinoma.

Total thyroidectomy and bilateral modified neck dissection was performed. All neurotic tissue totally resected .Two Redon drains putt in thyroidectomy site and fixed. Patient discharged four day with good condition .Voice, operation site wound and calcium of patient were perfect. Patient received 131I ablation therapy and then thyroid suppression therapy. IN six month follow up there was not any problem.

Introduction

Involving the skin by Papillary Thyroid Cancer (PTC) is rare, and few cases have been reported in the literatures. Skin involvement in PTC occurs mainly in the locally advanced or metastatic disease and is usually a late stage [1-3]. In some case Skin lesions may be the first presentation of thyroid malignancy [4,5]. Or it may present in recurrent disease after treatment [5-7]. The most commonly sites are the skin of scalp [2,5,8,9]. Second most common site is the skin of the neck [4,6]. Rarer sites include the face, limbs and scrotum [3,7,10]. The pattern of skin involvement also varies are as a solitary nodule with inflammatory appearance [2,4] PTC can also present with multiple cutaneous nodules or skin ulceration with bleeding [6,7,9,11]. Although PTC can metastasizes *via* the lymphatic system and hematogenously to distant skin sites, it can also involvement directly to the skin of the neck [3,7,12,13]. Computed tomography, whole-body isotope scan and emission Computed Tomography (PET), Help to show all lesions in visceral or other sites [3] .These model imaging can also show subdermal cutaneous metastasis [3]. Management in this stage of disease of skin lesions are parathyroidtectomy, lymph node dissection and resection of skin with adequate margins around the lesion during thyroidectomy. Adjuvant radioactive 131I therapy is need for such advanced disease. Finally close follow-up need to ensure early detection and diagnosis and intervention if recurrence occurs [1,5,7]. Her we report a case of PTC after seven years of diagnosis of PTC which patient refuse from surgery that present with skin metastasis of neck and necrosis and bleeding.

Case Presentation

A 65-year-old housewife presented to Razi Hospital Guilan Iran with a 7-year history of anterior neck swelling and mass. The patient seven year before this time underwent Fine Needle Aspiration Biopsy (FNAB) with diagnosis of papillary thyroid cancer and she refuse any treatment. It was painless. Four months prior to admission, the mass significantly increased in size and growth to downward on the anterior chest wall; it was associated with pain, ulceration of the overlying skin on the portion chest wall, and some time with bleeding (Figure 1). The patient denied a history of voice change, dysphagia and dyspnoea. She had no history of hyperthyroidism or hypothyroidism, bone and body pains, debate or hyper cholesterolemia but she had hypertension. She does not have any other medical problems, and her surgical and familial history was negative.

On physical examination, she appeared well. She except for huge enlargement of thyroid with both right and left lobe, which was irregular, nodular and soft, measuring vertically 21 cm, transversal 11 cm with a superficial small ulceration and bleeding under the skin of the over chest wall portion (Figure 1). The surface small veins were prominent, and the skin around the ulcer was fixed and erythematous

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and dark and fragile. The great vessels of neck were displaced posteriorly in bilaterally. There was no retrosternal extension and palpable lymph nodes.

T4, T3 and TSH were in normal range (euthyroid). PTC was initially diagnosed by fine-needle aspiration cytology in past seven year ago was PTC but patient refuse of operation. Ultrasonoghraphy of neck show very huge of right, left lobe and isthmus whit enlarge lymphadenopathy.

Computed Tomography (CT) of the neck and chest revealed a huge heterogeneously enhancing solid and cystic mass lesion (21 cm × 6 cm × 11 cm) involving right, left thyroid lobe and isthmus, diving the trachea and cervical oesophagus to the right side. Posteriorly, the mass compressed the left internal and right jugular vein. A few enhancing lymph nodes were visible in the left and right cervical region, but there was no retrosternal extension (Figure 2).

Preoperative direct laryngoscopy findings were normal. In the bipsy of skin, pathologist report was PTC. With diagnosis of invasive PTC with lower portion over chest, skin involvement, the patient underwent total thyroidectomy with lymph node dissection of right and left-sided selective lymph neck. All ulcerated and discoloration skin was totally with safe margin was excised (Figure 3). The adherent strap muscles and some medial fibres of the left sternocleidomastoid were excised. The left and right internal jugular vein was firmly adhered to the mass laterally and was separated with difficulty. Both recurrent laryngeal nerves and the 3 parathyroid glands were identified and saved.

The histopathological report confirmed the diagnosis of PTC (Figure 4). Metastasis involved 1 out of 4 lymph nodes in the central compartment and skin margin was free of tumore. The postoperative course was uneventful, and the patient was discharged on suppressant thyroxine therapy.

Upon review after 6 and 12 postoperative weeks, the patient was in good health (Figure 5). Her thyroglobulin level was <0.3 ng/mL, and her antithyroglobulin level was raised, at 997 IU. She received adjuvant radioactive 131I therapy.

Figure 1: Show a woman with huge neck mass of thyroid which extend to the chest wall with distal necrosis and mild ulceration and bleeding.

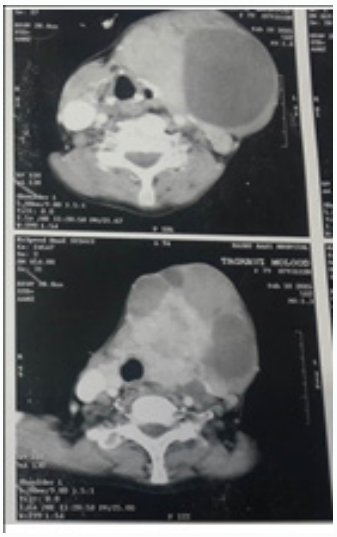

Figure 2: Show CT-scan of patient with huge neck cystic and solid mass of thyroid with displacement of esophagous and trachea and vessels to the right side.

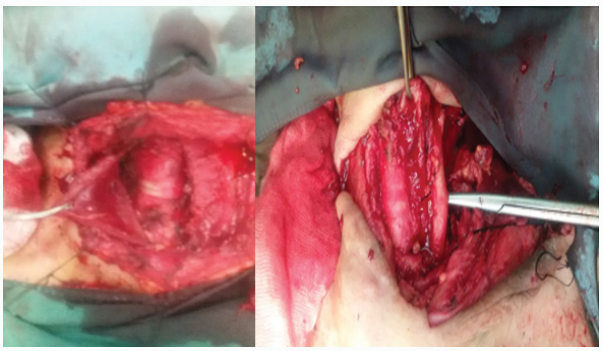

Figure 3: Show two day postoperative with good condition.

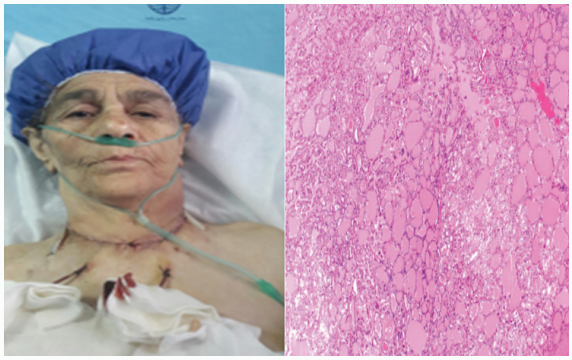

Figure 4: Show pathology of patient postoperative.

Discussion

PTC tends to metastasize to regional lymph nodes but distant metastasis is rare [2]. In the literature, the most common site of skin metastasis is the scalp and usually skin metastasis is encountered in previous PTC cases [8]. There is no gender predominance in skin metastasis of papillary thyroid cancer but our patients was female [12]. When distant metastasis develops, prognosis of the disease is poor [5]. Therefore, skin metastasis of papillary thyroid cancer

Figure 5: Show six week postoperative with good skin and operation site.

is a poor prognostic factor [5]. In our cases, there was evidence of persisting tumor in the neck from seven year ago. This shows that a case of recurrent PTC may represent with a distant metastasis. If the patient does not have a previous thyroid malignancy history, diagnosis of PTC metastatic to the skin may be difficult since primary skin tumors such as apocrine tumors have similar histopathological features [6]. FNAB was inconclusive for the diagnosis of carcinoma and excisional biopsy was performed (pa).

Skin lesions of our patients were not the first manifestation of PTC, the diagnosis of skin metastasis from PTC represent systemic spread of known papillary thyroid cancer in our patient. Although skin lesion is not always suspected involvement in patients with the history of thyroid cancer, in such conditions during admission with atypical skin lesions, biopsy should be taken for the differential diagnosis [6].

Preoperative CT scans important and revealed cervical lymph nodes, which were not appreciated clinically. CT also accurately delineated the status of perilesional structures, including the invaded anterior neck skin and spine metastases [8].

Although PTC with skin invasion occurs in advanced stage of disease and with poor prognosis, radical surgery with lymph node dissection can to improve prognosis of patients. Adjuvant 131I is important for effecting control and disease suppression [7,9,12].

Immunohistochemical staining needed to define the difinitive histological diagnosis of subtype and to distinguish between thyroid malignancy and other concurrent malignancies [6,7,9,12,14].

In literature, skin involvement and metastasis is also seen after FNAB of thyroid with suspicious of PTC [7]. However, in previous literature reviews the possible mechanisms of skin involvement are not be explained regarding skin metastasis of after FNAB or surgery of thyroid cancer. One of theory is that during surgery, thyroid nodules can fragmentation or ruptured and contamination with skin may cause skin involvement or metastasis [3,8]. It is crucial to distinguish the skin lesion that develops from needle track seeding from that occurring due to spontaneous invasion [4,8]. Spontaneous skin involvement commonly occurs from the biopsy site scar, while the needle track involvement typically occurs along the track of the biopsy needle [12,6]. In here, these patients were underwent FNAB of thyroid mass previously in another centers, but contamination or metastasis happened far from on the lowest portion on the chest wall on the skin of thyroid mass after FNAB of thyroid.

Skin metastases of thyroid cancer is localized to the upper body as scalp and face due to these locations' rich dermal capillary network and therefore providing an ideal metastatic focus. However, the exact mechanism of skin metastasis is not fully known yet [15].

Conclusion

When in a patient atypical skin lesions present with thyroid malignancy history, Skin metastasis of thyroid malignancy especially PTC should be kept in mind. For differential diagnosis Excisional biopsy is recomended for definite diagnosis because FNAB cannot do definite diagnosis. In our case because of pathology of PTC seven year ago, we performed total thyroidectomy, bilaterally Lymph node dissection and total involved skin with safe margin.

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