GAVIN PUBLISHERS

Journal of Oncology Research and Therapy

Rizo MI, et al. J Oncol Res Ther: JONT-126.

DOI: 10.29011/2574-710X.000026

Case Report

Eccrine Porocarcinoma with an Extensive Compromise of the Sternum and Thoracic Wall: A Case Report

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Citation: Rizo MI, Mauricio G, Samuel M, Alden G (2017) Eccrine Porocarcinoma with an Extensive Compromise of the Sternum and Thoracic Wall: A Case Report. J Oncol Res Ther: JONT-126. DOI: 10.29011/2574-710X.000026

Received Date: 13 July, 2017; **Accepted Date:** 28 July, 2017; **Published Date:** 4 August, 2017

Abstract

An Eccrine porocarcinoma is a very rare skin tumor that is originated in the sweat glands in the acrosyringium cells. This tumor may derive from a long standing benign lesion and occurs more frequently in the lower extremities, in elderly patients and with a low potentially of lymph node metastases.

We present a 62 years old patient, with a rare presentation of a porocarcinoma with an extensive compromise of the sternum and the thoracic wall. This presents a difficult challenge for treatment, due to the size, ulceration and infiltration, that required a wide local excision, a bilateral axillary dissection and a multidisciplinary approach for a clean margin and coverage.

Keywords: Eccrine Porocarcinoma; Skin Tumor; Sweat Gland Carcinoma; Thoracic Porocarcinoma

Introduction

A porocarcinoma is a very rare carcinoma of the sweat gland with an incidence of 0.005 to 0.01% of all the skin tumors, being it the most frequent [1-4]. It is originated in the acrosyringium cells (intraepidermal spiral duct) [2,3,5-7]. It was initially described in 1963 by Pinkus and Mehregan, that called it epidermotropic eccrine carcinoma [1,2], later in 1969, Mishima and Morioka gave it the actual denomination [3,8].

It presents as a solitary plaque or as a nodule with verrucousness or ulceration, with a size that ranges from 2 to 10 cm. In 30 to 50% of the cases, it can derive from a long evolution benign lesion that unexpectedly presents rapid growth accompanied by pain and itching; it can also originate from novo [1,3,5,9,10]. The age of appearance is between 50 and 80 years. Its localized in the lower extremities (50%), in the torso (24%) and in the head and neck (18%) [3,4,6]. Other less common locations include the face, scalp and ears (20%), upper extremities (20%), abdomen (9%) and in the genitals (12%) [3,4,11,12].

The surgical procedure is the treatment of choice, with a wide local excision, which has been the most commonly accepted behavior through history with margins between 1 and 2 cm, but it's also associated with a local recurrence rate of approximately 20%, distant metastases of 12% and a mortality of 7% [2,5,9,13,14]. This case is an unusual presentation of a porocarcinoma with a wide extension and compromise of the of the thoracic wall and the sternum that presents a challenging surgical treatment.

Clinic Case

Our case was submitted to us from another institution with a diagnosis of a locally advanced squamous cell carcinoma due to the compromise of the thickness of the thoracic wall and an uncommon location of presentation. The patient is a male of 62 years old with 1 year of evolution of a lesion in the sternal region with a rapid growth and ulceration. This was biopsied extra-institutionally and a squamous cell carcinoma was informed. After reviewing

the pathology, it was compatible with porocarcinoma, with a full compromise of the wall thickness with a level of invasion of the reticular dermis (IV), without lymphovascular invasion. Physical exam: presents a big ulcerated exophytic mass in the sternal region of approximately 12*10 cm, with a neovascularization of the skin adjacent to the tumor lesion (Figure 1).

Figure 1: Clinical Image of the Giant Thoracic Porocarcinoma.

A CT scan of the chest showed an exophytic lesion in the anterior thoracic wall infiltrating the skin, the subcutaneous cellular tissue plane and the medial aspect of the left major pectoral muscle, with bilateral axillary suspicious adenomegalies. A pulmonary node with density of soft tissue in the inferior left lobule of suspicious aspect was also found. Furthermore, a neck CT scan discarded any adenomegalies Figure 2.

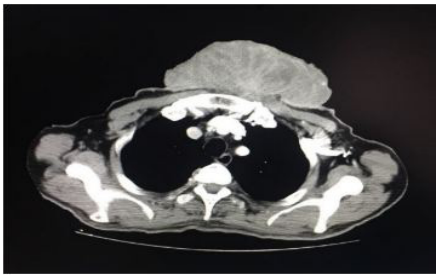

Figure 2: CT Scan of the Chest with Exophytic Lesion in the Anterior Thoracic Wall.

Considering the compromised area and the extension of the lesion, it was decided to carry on the resection of the malignant tumor of the thorax with wide local excision of the tissues with partial resection of the major pectoral muscle, as well as major bilateral axillary dissection. A porocarcinoma of exophytic aspect with necrotic zones, ulceration and infection in the anterior thoracic wall of 25x30 cm was evidenced, with a lymphovascular invasion and dermis infiltration as well as possible compromise of the external table of the sternum and of the internal mammary nodes. The bilateral axillary nodes had a macroscopic malign aspect. Furthermore, the defect was covered with a flap of skin, made with microsurgery.

Figure 3: Wide Local Excision of the Anterior Thoracic Wall and The External Table of the Sternum.

During the post operatory treatment, the patient is transferred to the ICU with ventilation and vasopressor support with antibiotic covering. In the third day of the post operatory treatment a suffering of the flap was evidenced due to arterial thrombosis of the pedicle of the flap, requiring operation and debridement and a covering of the defect with fascial muscle flaps of the pectorals and skin grafts of partial thickness (Figure 4 and Figure 5).

Figure 4: Third Postoperative Day, Evidenced of Arterial Thrombosis of Pedicle of the Inferior Flap.

Figure 5: Coverage with Skin Grafts of Partial Thickness and the ALT Flap.

Pathology report: skin, sternum, lesion of wide local excision with compromise due to a porocarcinoma. With a tumor size of 17x14 cm and a thickness of 23 mm, the resection margins of the skin and bone and the soft tissues where free from tumor compromise, with level of invasion VI and presence of lymphovascular invasion. With 25 negative right axillary lymphatic nodes and 18 negative left axillary lymphatic nodes for tumor compromise.

Subsequently, good recovery with a satisfactory evolution with vital flaps and integration of the skin grafts, the antibiotic scheme was finished and the patient was released. He presented an adequate evolution with a follow-up without recurrences.

Figure 6: Postoperative Results.

Discussion

This is a porocarcinoma that has an uncommon presentation, with a hard diagnosis and initially it was even considered that it was a squamous cell carcinoma. Likewise, the usual size of the presentation that can usually reach 10cm, in this case was extended over the thoracic wall with a size of approximately 17 cm with a localization that is presented only in 20% of the cases as it is the chest [3,4], since it is more commonly presented in the extremities.

In this case, the evolution of the disease presented a rapid growth, although it is not known exactly if it was over a previous lesion [1,5,9,10]. Even with a compromise of the sternum, which happened to be challenging for its surgical treatment, requiring the intervention of several specialties such as breast and soft tissues, thoracic and plastic surgery, to give the proper treatment to the patient.

Despite that 20% of the cases can present a lymphatic compromise and that it is presented with a greater frequency in tumors that are greater in size as happened in this case [2,5,9,13,14], no metastatic lymphatic nodes involvement was found, although intraoperatively, the lymph nodes where macroscopically big, probably due to the local inflammatory process that this patient presented previous to the surgery.

The evolution of the patient was satisfactory and with a good esthetic result despite the considerable skin sacrifice that it required. It is also worth noting that a proper surgical treatment was given, expecting that we can achieve a low relapse rate, despite factors of bad prognosis such as the size, the thickness and the lymphovascular invasion [4,5,15].

Due to the fact that this is an uncommon tumor, we want to highlight the importance of being always sure of the diagnosis of the patient in order to deliver the best and more complete treatment possible.

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