Recurrent Pleural Effusion and Pulmonary Metastases from a Cutaneous Apocrine Tumour of the Axilla

S. Guerriero*, C. Ruffolo**, A. R. Lombardi***, A. Tirone*, G. Tirone*

*Surgical Unit, ***Anatomia Patologica, Clinica Chirurgica 1, Ospedale S. Martino, Belluno; **Department of Surgical and Gastroenterological Sciences, University of Padova, Italy.

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Abstract. Sweat gland carcinomas are very rare and they are differentiated between tumours of apocrine or eccrine origin. The axilla is the most common site for apocrine gland carcinoma for its great abundance of these glands. There are no recommendations in literature regarding appropriate treatment schedules for apocrine gland carcinomas in advanced stages. We report a case of recurrent left pleural effusion in a 76-year old man with metastatic cutaneous apocrine tumour of the right axilla. We describe the clinical and histological features, with management options and a review of the relevant literature on apocrine gland carcinoma.

Introduction

Apocrine gland carcinoma is a rare variant of sweat gland carcinomas. Apocrine gland carcinomas commonly arise in the axilla, in the breast and in the upper arm followed by the anogenital region, eyelid, ear, chest, wrist, foot, toe, lip and finger according to the number of apocrine glands that are present. It can spread by way of the lymphatics to regional lymph nodes (usually present at the time of diagnosis) and ultimately pass into the systemic circulation, with the lung being the most common site for metastasis. Few cases of disseminated metastases of these tumours are reported in literature with a poor prognosis.

The mean survival of patients with malignant pleural effusions is around one year. Since symptoms due to these effusions severely impair the quality of life of patients with a so limited life expectancy, we report the case of recurrent left pleural effusion in a 76-year old man with metastatic cutaneous apocrine tumour of the right axilla successfully palliated with thoracoscopic talc pleurodesis.

Case report

A 76-year old man was admitted in March 2005 to our surgical unit for recurrent left pleural effusion. The patient presented with dyspnoea with diminished breath sounds and absent tactile and vocal fremitus at the left base. Diagnosis of cutaneous apocrine tumour of the right axilla was made four years earlier (Fig. 1). In the meantime, the patient had several cutaneous recurrences after surgical excisions and thoracentesis had been repeated to drain the left pleural cavity; lymphadenectomy was not performed because clinical lymph node involvement was not present at the time. A CT scan of the chest revealed bilateral pulmonary metastases and left pleural effusion (Fig. 2). The patient underwent left video-assisted thoracoscopic surgery (VATS) that confirmed the pulmonary metastases and the histological examination of pleural tissue was similar to that of the original skin neoplasm (Fig. 3); diagnosis of metastatic pleural tissue was made: 800 cc of pleural effusion was drained and pleurodesis by insufflation of 3 gr of powdered talc was performed after re-expansion of the lung under direct vision together with a right axillary lymphadenectomy because lymph node involvement was suspected. This technique was successful and the patient was discharged on the nineth postoperative day, without complications. The patient was then proposed for adjuvant chemotherapy. After fifteen months, the patient is still alive without dyspnoea and no recurrent pleural effusion.

Discussion

Sweat gland carcinomas are very rare and they are differentiated between tumours of apocrine or eccrine origin. Apocrine carcinomas manifest as non-tender single or multiple, firm, rubbery or cystic masses with red to purple overlying skin (1). The axilla is the most common site for apocrine gland carcinoma for its great abundance of these glands, followed by the anogenital region (2). Diagnosis is often delayed since lymph node involvement at the time of presentation is seen in 50% of patients with apocrine gland tumours only. Wide local
excision is the treatment of choice but only one study has suggested the adequate surgical margin to be of 1 to 2 cm which is considered adequate for other tumours of the skin and dermal elements (3). Patients with clinically involved lymph nodes should undergo tumour resection and lymph node dissection (4). Sites of sweat gland carcinoma metastasis include nodes, lungs, liver and bone. There are no recommendations in literature regarding appropriate treatment schedules for apocrine gland carcinomas in advanced stages. Few cases of disseminated apocrine gland carcinoma metastases exist in literature and almost all resulted in death (5-9). Sweat gland carcinomas are radio-resistant and chemotherapy has been infrequently employed (10). Chemotherapy and/or radiotherapy have a limited role.

Pleural effusion is a common complication of both primary and secondary pleuropulmonary malignancies and will cause death within months. The majority of malignant pleural effusions are symptomatic and the consequent dyspnoea is a distressing symptom that greatly impairs the quality of their remaining life. Usually over 90% of effusions recur within one month after thoracocentesis.

VATS is able to evaluate and biopsy direct pleural implants. In lung cancer, VATS should be considered the gold standard in excluding pleural deposits, especially in cases associated with pleural effusion and negative cytology on thoracocentesis. In one series of 21 cases of lung cancer with pleural effusion which was cytologically negative, 16 did not proceed with thoracotomy because of the VATS findings (11). Moreover, in another series of 138 cases of idiopathic pleural effusions, in which all other diagnostic tests had proved negative, malignancy was diagnosed after VATS in 109 cases (80%) (12). In particular, in this malignancy, in a case report of pleural effusion from apocrine sweat gland carcinoma described by Otani et al., cytological examination of needle aspiration fluid was useful to make a
diagnosis of metastatic disease, but the authors specify, when cytologically characteristic features are present (13).

Pleurodesis is the process of obliterating the pleural space, preventing the development of pleural effusion. This can be performed mechanically, using pleural abrasion or via various chemical sclerosants. Talc has been shown to be superior to all other agents used for chemical pleurodesis (14).

In this case, thoracocentesis was not sufficient for the treatment of malignant pleural effusion. The patient underwent a mini invasive procedure with low morbidity and after the operation, his quality of life markedly improved, even if the prognosis was not modified.

In conclusion sweat gland carcinomas are rare cancers with a poor prognosis often presenting as histological surprises. Surgery in the form of wide local excision and lymph node dissection is the mainstay of treatment. In case of malignant pleural effusion VATS pleurodesis is a useful and effective procedure for the management of malignant pleural effusion, offering rapid recovery and low morbidity.

References


S. Guerriero
Surgical Unit, Ospedale S. Martino
Viale Europa 22
I-32100 Belluno, Italy
Tel. : +390437216468
Fax : +390437216587
E-mail : silgue@infinito.it