ejpmr, 2023, 10(5), 525-527

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Case Study

ISSN 2394-3211

EJPMR

PRIMARY ADENOID CYSTIC CARCINOMA OF THE LUNG: A CASE REPORT

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Article Received on 21/03/2023 **Article Revised on 09/04/2023** **Article Accepted on 30/04/2023**

ABSTRACT

Adenoid cystic carcinoma is a rare cause of thoracic malignancy, and the prognosis may depend on the extent of surgical resection and adjuvant radiotherapy. Complete resection has low rates of local recurrence but is complicated by the involvement of central airways. Adjuvant radiotherapy is frequently recommended but unproven. A 67-year-old woman patient, with prior history of insulin-dependent diabetic for 10 years, known hypertensive and carrier of undocumented heart disease, symptomatology started 2 years ago with medium abundance hemoptysis, cough and sputum . A CT angiography showed a right lower lobar broncho-pulmonary lesion with highly suspected lesion and a pulmonary collapse with right mediasnal and hilar lymphadenopathy. In the immunohistochemical findings a adenoid cystic carcinoma. The abdominal CT scan was normal. The patient was initially treated by neoadjuvant chemotherapy due to the non-resecability of the tumor. The evaluation showed a poor evolution with an increase in the size of the lobary process.

KEYWORDS: Adenoid Cystic Carcinoma, Lung Cancer, Chemotherapy.

INTRODUCTION

Adenoid cyctic carcinoma (ACC) or formerly called primary lung cylindroma is a rare, low-grade malignant tumour, accounting for 0.09-0.2% of all lung cancers. It is of long local evolution, but tends to infiltrate along the airways (1). the natural history can vary; some patients with indolent cancer remain asymptomatic for long periods, whereas others have rapidly progressive disease. Chemotherapy is generally reserved for the palliative treatment of symptomatic locally recurrent or metastatic disease that is not amenable to further surgery or radiation.

CASE PRESENTATION

We report the observation of a patient aged 67 years, , with prior history of insulin-dependent diabetic for 10 years, known hypertensive and carrier of undocumented heart disease, symptomatology started 2 years ago with medium abundance hemoptysis, cough and sputum . Physical examination is without abnormalities. A CT angiography showed a right lower lobar broncho-pulmonary lesion with highly suspected lesion and a pulmonary collapse with right mediasnal and hilar lymphadenopathy (Figure 1). A bronchoscopy with biopsy was carried out, with the anatomo-pathological study a morphological and immunohistochemical aspect of a adenoid cystic carcinoma without vascular emboles. The remainder of the staging was without abnormalities . The tumour has been classified as T4N2M0, it is considered unresecabe. The therapeutic management consisted of neoadjuvant chemotherapy based on taxanes with evaluation after 3 cures to judge the operability . If the patient remains inoperable, radiation therapy will be considered. The evaluation showed a poor evolution with an increase in the size of the lobary process and the hilar lymphadenopathy. The therapeutic decision is to add 3 other chemotherapy cures based on platinum salts and doxorubicin with evaluation after end of cures.

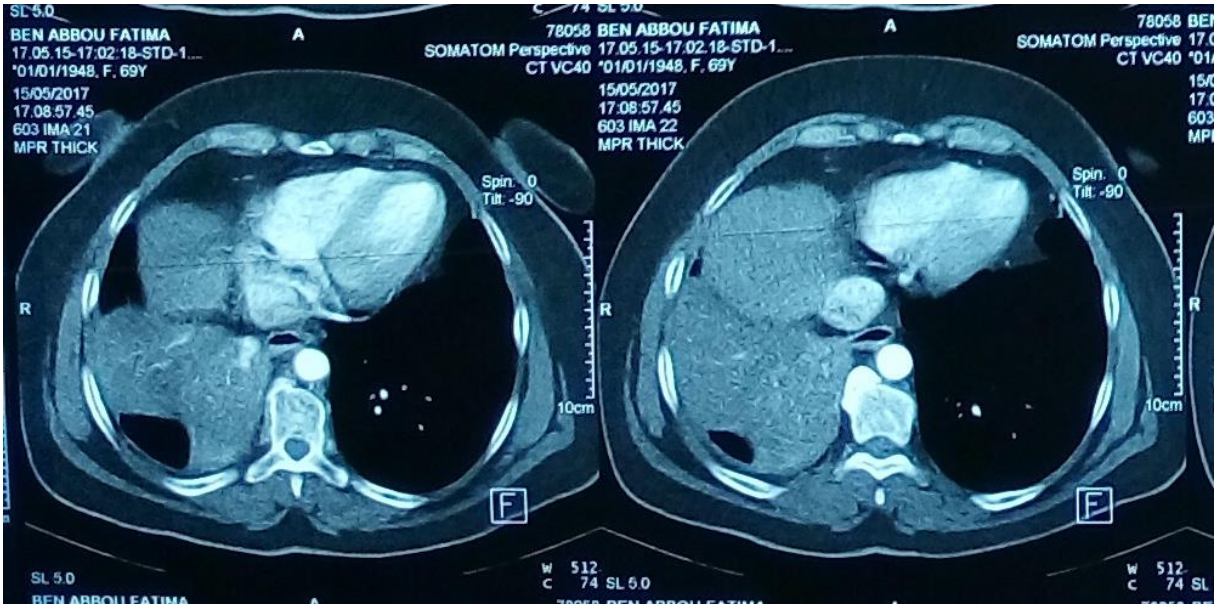

Figure 1: Angiography CT that shows the local extension of adenoid cystic carcinoma of the lung.

DISCUSSION

ACC is a rare tumour that accounts for 0.1-0.5% of primary lung cancers with 50% disease-free survival at 5 years, it shares the same histomorphological characteristics with ACC from other sites.[1] Median age at diagnosis reported by 3 independent studies ranging from 46 to 54 years, which is younger than the median age reported for other primary lung tumours with a female predominance of 60%.[2] It is a carcinoma with a development most often intraluminal in the trachea or in the large bronchi, however there may be an extension within the pulmonary parenchyma or mediastinal fat. Clinical presentation is dominated by signs of airway obstruction such as dyspnea, cough, chest pain and hemoptysis.[3] The ACC presents a double contingent of epithelial and myoepithelial cells with 3 types of architectural variants.[4] The tubular form is made of tubes and channels bordered by a double layer of epithelial internal and myoepithelial external cell. The cribriform form, the most common, is formed by massifs of cylindromatal aspect and micro-cystic occupied by mucoid and basophilic hyalin material. The solid form consists of uniform basal cell clusters. Tumours may be composite or predominant.[5] The tumor destroys and infiltrates, in places, the bronchial wall, we observe images of vascular emboli, it is a neurotropic tumor, it is therefore necessary to look for peri-nervous gears (present in more than 40% of cases).[6] Treatment is based on three therapeutic modalities, which are surgery, radiotherapy, and interventional endoscopy. Chemotherapy has no place outside metastatic or locally advanced forms.[7] The surgery consists of tumor resection with tracheal overlay and terminal anastomosis and satellite lymph node curage.[7] Adjuvant radiotherapy is recommended, at a dose varying from 45 to 65 Gray according to the teams, some systematically recommend radiotherapy, while others only offer this treatment when section slices are invaded. A period of one month is at least recommended after surgery and it may be useful to perform a bronchial fibroscopy to ensure healing.[7] Exclusive radiotherapy is offered at a dose greater than 60 Gray when the lesion is considered to be non-resecible. Endo-bronchial brachytherapy can be used to increase the total radiation dose and improve local control rate.[7] A study conducted from August 2011 to December 2017 at the first affiliated hospital of the University of Zhengzhou on Fifty-nine cases of primary pulmonary ACC among which The state of the epidermal growth factor receptor (EGFR), KRAS and BRAF genes was analysed in 15 of the 59 case studies for possible treatment with targeted therapy but no mutation of EGFR, KRAS and BRAF was detected in the 15 cases tested.[8] Endoscopic and radiological monitoring is necessary to watch for any local recurrence or onset of metastases that are often pulmonary, hepatic, lymph node and bone.[7] The prognosis remains reserved, it is a malignant tumour with slow evolution which recurrent very frequently after 7, even 15 years. Recurrences are also due to incomplete resection of ACC, with surgical limits sometimes in unhealthy areas. It is therefore recommended, for this type of tumour, to carry out extemporaneous examinations to check the margins.[9]

CONCLUSION

ACC is a rare tumour. the early radical resection and radiotherapy is associated with a low risk of local recurrence in patients with thoracic ACC. Chemotherapy is generally reserved for the palliative treatment of symptomatic locally recurrent or metastatic disease that is not amenable to further surgery or radiation.

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