Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/17289
DOI URL: http://dx.doi.org/10.21474/IJAR01/17289

RESEARCH ARTICLE

ADENOSQUAMOUS CARCINOMAOF THE LUNG : TWO CASES REPORT

Afaf Thouil[1], Meriem Rhazari[1], Mohamed Lakhal[2] and Hatim Kouismi[2]

1. Department of Respiratory Diseases , Research and Medical Sciences Laboratory , Faculty of Medecine and Pharmacy of Oujda , Mohammed VI University Hospital , Mohammed first University.Oujda , MOR.
2. Pulmonology Department, Mohammed VI University Hosppital Oujda, MOR.

Manuscript Info

Manuscript History
Received: 25 May 2023
Final Accepted: 28 June 2023
Published: July 2023

Key words:-
Carcinoma, Adenosquamous, Lung Cancer

Abstract

Adenosquamous carcinoma (ASC) is an uncommon and aggressive form of non-small cell lung carcinoma, representing an independent prognostic factor indicating poor prognosis. In this report, we present the cases of two patients admitted for the management of Adenosquamous carcinoma, one of whom was diagnosed based on a skin lesion. Both patients were at different stages of the disease at the time of management.

Introduction:-

Adenosquamous carcinoma (ASC) is an uncommon form of lung cancer, accounting for a small proportion of non-small cell lung carcinoma (NSCLC) cases. The World Health Organization (WHO) classification of lung tumors identifies ASC as a distinct category, defining it as a carcinoma with components of both squamous cell carcinoma (SCC) and adenocarcinoma, each comprising at least 10% of the tumor [1,2].

Case presentation:

Case Presentation 1: We report the case of Mr. AM, aged 64 years, with a history of chronic smoking. He was previously diagnosed with undifferentiated carcinoma of the nasopharynx (UCNT) and was treated with radiochemotherapy, with the last treatment in 2011. Currently, the patient presents with left thoracic pain that has been evolving for 2 months in a context of altered general state. The clinical examination was unremarkable.

A thoracic and abdominal computed tomography (CT) scan was performed, revealing a hypodense rounded lesion of the left anterobasal segment. The lesion was enhanced after injection of the contrast product, delimiting areas of necrosis (Figure 1), as well as nodules and micronodules of the left lung. The largest nodule, target I, was located in the posterior-apical segment of the upper left lobe and measured 10 x 9 mm, while target II was located in the posterior segment-basal lower left lobe and measured 10 x 0.7 mm.

Corresponding Author:- Afaf Thouil
Address**:-** Department of Respiratory Diseases , Research and Medical Sciences Laboratory, Faculty of Medecine and Pharmacy of Oujda, Mohammed VI University Hospital, Mohammed first University.Oujda, MOR.

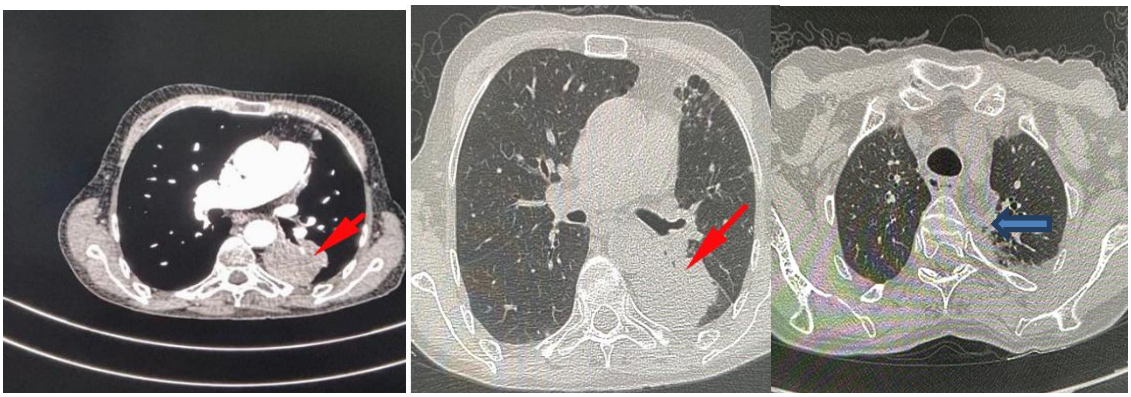

Figure 1:- Left anteromedial segmental process (Red arrows) with a posteroapical segment nodule (blue arrow) in the left upper lobe.

Bronchoscopy showed an extrinsic compression of the basal pyramid of the left bronchial tree, while the bronchial biopsy with bronchoaspiration in search of neoplastic cells was unremarkable. A CT-guided transparietal biopsy showed a morphological and immunohistochemical aspect in favor of an adenosquamous carcinoma.

Histological examination (Figure 2) of the biopsy fragments showed the presence of a dual-component proliferation: glandular with some glandular lumens and epidermoid formed by polygonal cells with abundant cytoplasm and atypical nuclei (A, B). The immunohistochemical study showed positive staining of the epidermoid component by P63 (C) and the glandular component by Ck7(D), confirming the diagnosis of an adenosquamous lung carcinoma.

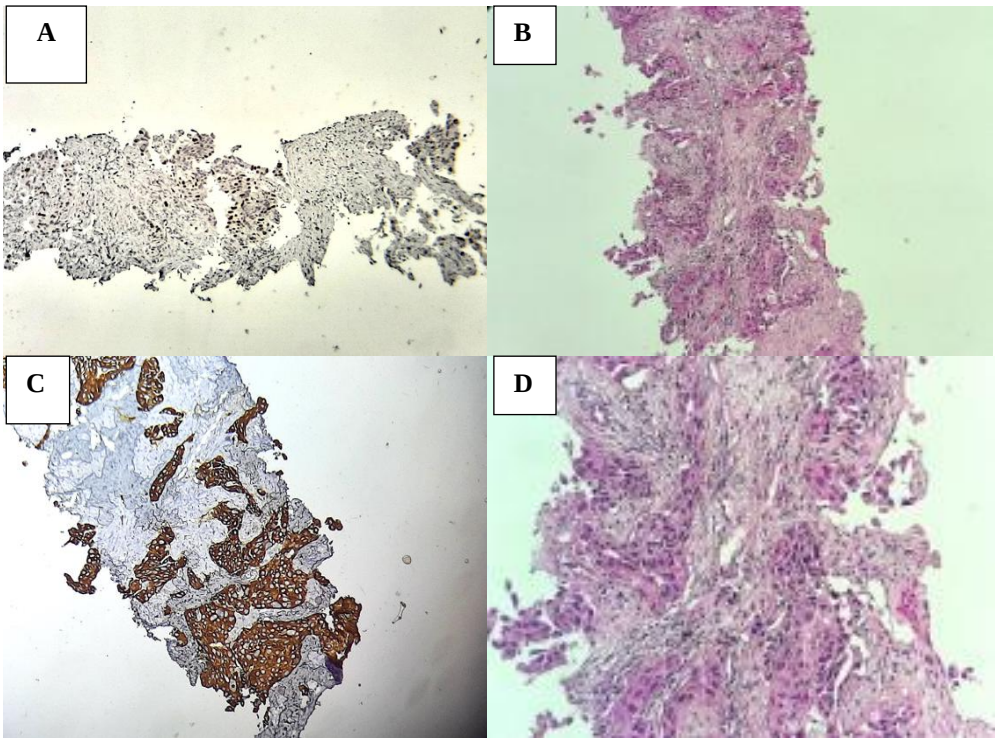

Figure 2:- Histological aspects confirming the diagnosis of Adenosquamous carcinoma.

As part of the workup for resectability, a PET scan (Figure 3) was performed, showing a hypermetabolic lung tissue process (blue arrow) with an SUV max of 12.6. The left upper lobe nodule was also hypermetabolic, with an SUV max of 6.9. No hypermetabolic node focus was found above or below the diaphragm, and no other hypermetabolic focus was suspicious of a secondary location.

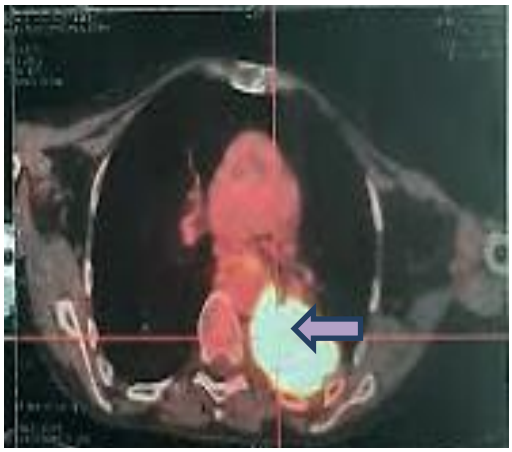

Figure 3:- PET SCAN showing a hypermetabolic lung tissue process (Blue Arrow).

Based on these findings, the diagnosis of a pulmonary adenosquamous carcinoma was classified as T4N0M0, Stage IIIA. After a multidisciplinary consultation meeting, the indication for pneumonectomy was given, and the patient was referred to thoracic surgery for preoperative assessment and further management.

Case presentation 2:

Mr. El M., a 62-year-old man with a history of chronic smoking who quit three years ago, was admitted for low-abundance hemoptysis and grade 3 dyspnea on the Modified Medical Research Council (mMRC) scale, evolving in the context of altered general condition.

The clinical examination revealed a dyspneic patient with a regular, round, fleshy, spontaneously ulcerated, painless, hard swelling under the left chin (Figure 1). The skin lesion biopsy indicated a tumor proliferation arranged in glandular structures and squamous polygonal cells. Immunohistochemical analysis favored the presence of carcinomatous cells expressing the thyroid transcription factor TTF1, cytokeratin CK7, CK5/6, and P63, suggesting a possible primary in the lung.

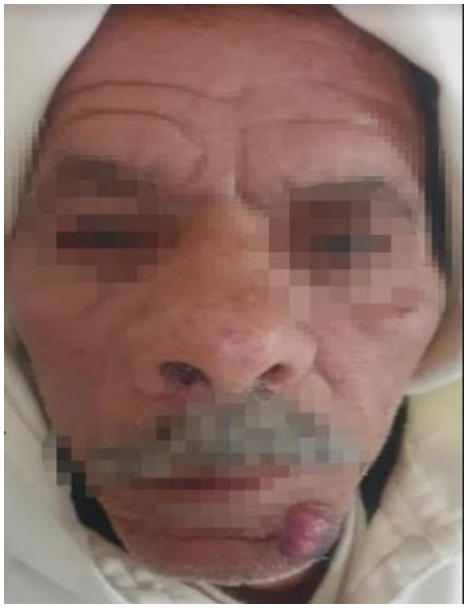

Figure 1:- Swelling under the chin.

Chest and abdominal computed tomography (CT) revealed a locally advanced process in the right inferior lung lobe (Figure 2) that had metastasized to pleural, pulmonary, hepatic, and subcutaneous levels.

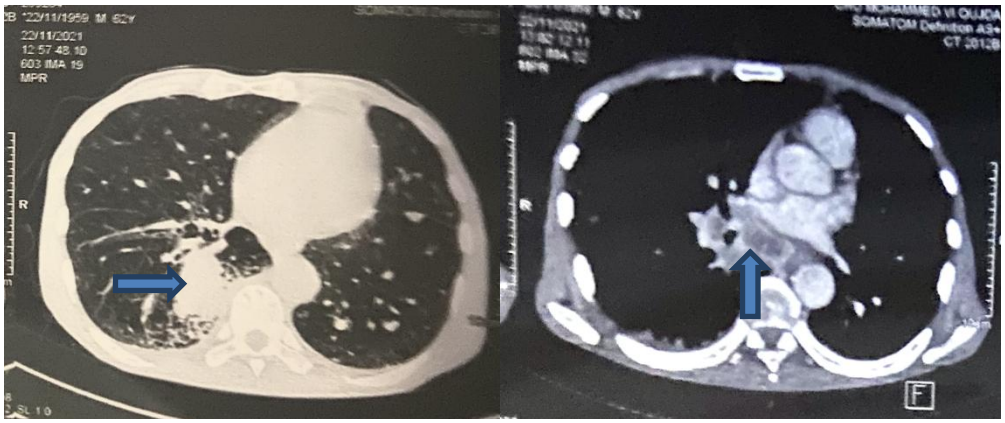

Figure 2:- a locally advanced process of the right inferior lung lobe (Blue Arrow).

Bronchoscopy (Figure 3) showed budding at the entrance to the right basal pyramid orifice, and a bronchial biopsy confirmed the adenosquamous nature of the lung carcinoma. *

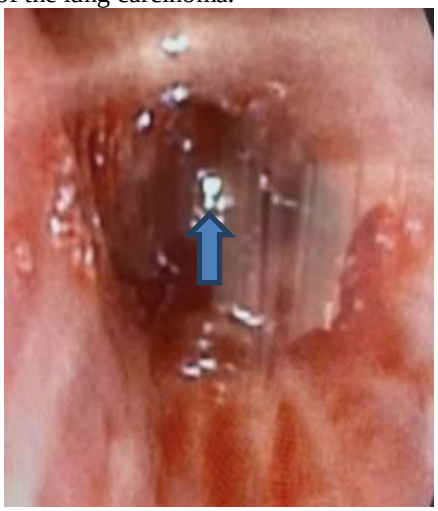

Figure 3:- Endoscopic appearance in favor of a bud obstructing at the entrance of the right basal pyramid (Blue Arrow).

After discussion at the multidisciplinary consultation meeting, the tumor was classified as stage IV, and the patient was referred to oncology for palliative chemotherapy."

Discussion:-

ASC is a relatively rare subtype of lung carcinoma, representing 0.4% to 4% of all lung carcinomas [3,4,5,6,7]. The histogenesis of the neoplasm is unclear, but it appears to be much more complex than a simple mixture of SCC and ADC components. Although there is some divergence of opinion based on current knowledge, the WHO criteria provide a reasonable basis for its definition and the required proportions of CSC and ADC [3]. Several large series describing the incidence and clinical, radiological, and histological features of ASC are reported. The clinical features of ASC are variable and inconsistent, but a predominance in males and an association with smoking are reported [3,4,8].

Tumors can be located centrally as well as peripherally. By CT scan, centrally located tumors usually show post-obstructive inflammatory changes, whereas peripheral tumors tend to present as ground glass opacities [1,9]. In our two patients, the tumors tended to be solid in nature. Centrally located tumors tend to be predominantly SCC, whereas peripheral ASC tends to be predominantly ADC [10,11,12]. Although there is agreement on the presence of well-defined components of ADC and SCC, investigators have used different thresholds for the proportion of each component that should be present. Takamori et al [3] require that at least 5% of the opposite component be present. Fitzgibbons and Kern [4] made a diagnosis of ASC based on the presence of at least 10% of the other component in

each case. Also, the WHO classification of lung tumors states that at least 10% of each component must be present in ASC [1,2].

The main differential diagnoses of ASC are: entrapment of benign alveolar and bronchiolar acinar structures in CSC, and mucoepidermoid carcinoma [1]. ASC is an aggressive tumor, unfortunately diagnosed at a later stage than ADC or SCC. Its survival rates, counted between 3 and 5 years, are also lower than the latter. At a similar stage, the overall 5-year survival rate is about 21%. Multivariate analyses show that perineural invasion at a more advanced stage and the presence of metastases (the brain being a preferred site) are of poor prognosis [1,3,12]. In our series, our first patient was diagnosed at an early stage allowing him to benefit from curative treatment.

There is no unified standard chemotherapy for ASC; surgery is the preferred treatment option. Lobectomy with lymphadenectomy is considered a standard treatment, while sub-lobar resection can be applied for early-stage lung cancer or in patients with poor lung function [13].

Conclusion:-

ASC is an uncommon and aggressive subtype of non-small cell lung carcinoma that is associated with a poor prognosis. Despite its clinical significance, the histogenesis of ASC remains unclear. Current understanding suggests that ASC is much more complex than a simple mixture of SCC and ADC components, and ongoing research is needed to shed more light on the origin and progression of this neoplasm.

Bibliography:-

[1]. Nagarjun Rao, MD, FRCPath;Département de pathologie , Medical College of Wisconsin, 9200 W Wisconsin Ave, Milwaukee, Wisconsin 53226;
[2]. Travis WD , Brambilla E , Muller-Hermelink HK , Harris CC , éd., Pathologie et génétique des tumeurs du poumon, de la plèvre, du thymus et du cœur. Lyon : Presse CIRC ; 2004 ;
[3]. Takamori S, Noguchi M, Morinaga S, et al. Caractéristiquesclinicopathologiques du carcinome adénosquameux du poumon. Cancer. 1991 ;67(3):649-654 ;
[4]. Fitzgibbons PL, Kern WH. Carcinome adénosquameux du poumon : une étude clinique et pathologique de sept cas. HumPathol. 1985 ;16(5):463-466.
[5]. Auerbach O, Frasca JM, Parks VR, Carter HW. Une comparaison de la classification de l 'Organisation mondiale de la santé (OMS) des tumeurs pulmonaires par microscopie optique et électronique. Cancer. 1982 ;50(10) : 2079-2088 ;
[6]. Yesner R, Gerstl B, Auerbach O. Application de l 'Organisation mondiale de la santé du carcinome pulmonaire au matériel de biopsie. Ann Thorac Chirurgien. 1965 ;10 :33-49 ;
[7]. Naunheim KS, Taylor JR, Skosey C, et al. Carcinome adénosquameux pulmonaire : caractéristiques cliniques , traitement et pronostic. Ann Thorac Chirurgien. 1987 ;44(5):462-466 ;
[8]. Filosso PL, Ruffini E, Asioli S, et al. Carcinomes adénosquameux pulmonaires : un sous-type histologique de mauvais pronostic. Cancer du poumon. 2011 ;74(1):25-29 ;
[9]. Watanabe Y , Tsuta K , Kusumoto M , et al . Caractéristiquesclinicopathologiques et résultatstomodensitométriques de 52 carcinomes adénosquameux du poumon réséquéschirurgicalement .AnnThorac Chirurgien. 2014 ;97(1) :245-251 ;
[10]. Ishida T, Kaneko S, Yokoyama H, Inoue T, Sugio K, SugimachiK. Carcinome adénosquameux du poumon . Caractéristiquesclinicopathologiques et immunohistochimiques. Suis J Clin Pathol. 1992 ; 97(5) :678-685 ;
[11]. Ashley DJ, Davies HD. Carcinome mixte glandulaire et épidermoïde de la bronche. Thorax. 1967 ;22(5):431-436 ;
[12]. Watanabe Y, Tsuta K, Kusumoto M , et al . Caractéristiquesclinicopathologiques et résultatstomodensitométriques de 52 carcinomes adénosquameux du poumon réséqués chirurgicalement . Ann Thorac Chirurgien. 2014 ;97(1):245-251 ;
[13]. Schneider BJ, Daly ME, Kennedy EB. Radiothérapie corporelle stéréotaxique pour le cancer du poumon non à petites cellules à un stade précoce : approbation par l'American Society of ClinicalOncology de l'American Society.