

Primary pulmonary plasmacytoma: A case report

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ABSTRACT

Introduction: Extramedullary plasmacytoma is a rare tumor, mainly located to the upper aerodigestive tract, primary pulmonary plasmacytoma is an exceptional localization. **Case Report:** We report the case of a patient who presented an isolated pulmonary plasmacytoma confirmed by microscopic and immunohistochemical examination. The patient had a surgical resection without any adjuvant treatment. **Conclusion:** Despite the low incidence of PEM (plasmacytome extramédullaire) (less than 2%) and the rarity of this location, we should report any cases found, in order to determine the clinical, epidemiological and prognostic characteristics of the tumor more accurately, as well as its appropriate treatment.

Keywords: Lung, Solitary plasmacytoma, Surgery, Treatment

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INTRODUCTION

Plasmacytomas are B cell lymphomas with expression primarily in bone marrow plasma cell tumor. These plasmacytomas may be primitive, called yet solitary or secondary occurring in multiple myeloma patients. The bone form or intramedullary form is the most common and represents locations. The extramedullary form is rare and affects mainly the upper aerodigestive tract. The isolated lung involvement is extremely rare to see with an average age of 60 years and a male predominance [1]. The clinical presentation is varied and nonspecific.

CASE REPORT

A 40-year-old male presented with an isolated pulmonary plasmacytoma revealed by hemoptysis associated with scapular pain. The chest X-ray showed a left apical opacity (Figure 1), the CT scan of chest showed a large left lung mass of 7x5x3 cm without pleural and mediastinal involvement (Figure 2).

Pathological examination of the preoperative biopsies failed to diagnose plasmacytoma. The patient received in May 2008 a left upper lobectomy with lymph node dissection.

The examination of the surgical specimen found a poorly differentiated tumor proliferation, without lymph node involvement in complete resection. Immunohistochemistry confirmed the plasma cell type (Figure 3). The myeloma search results, bone marrow biopsy, protein electrophoresis, 24 proteinuria, and renal function were negative.

The patient is in complete remission clinically and radiologically after 22 months.

DISCUSSION

The extramedullary plasmacytoma location is very rare, and isolated pulmonary localization is exceptional.

Given the rarity of the disease (the small number of cases recorded in literature), the information is still quite rare.

All organs can be affected including the aerodigestive tract, however, pulmonary location is exceptional (less than 2% of PEM), the average age is around 50 years with a sex ratio of 3:1 [1, 2].

Clinical manifestations are variable; it may be a cough, dyspnea and sometimes hemoptysis. In a quarter of

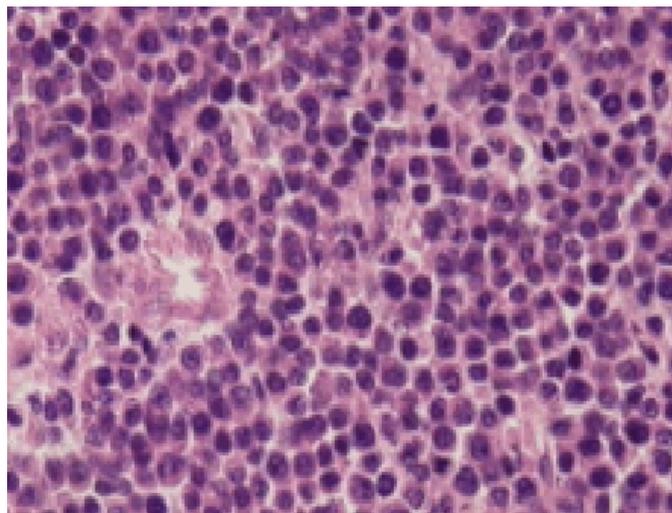


Figure 3: Immunohistochemistry confirmed the plasma cell type.



Figure 1: Chest X-ray showing left apical pulmonary opacity.

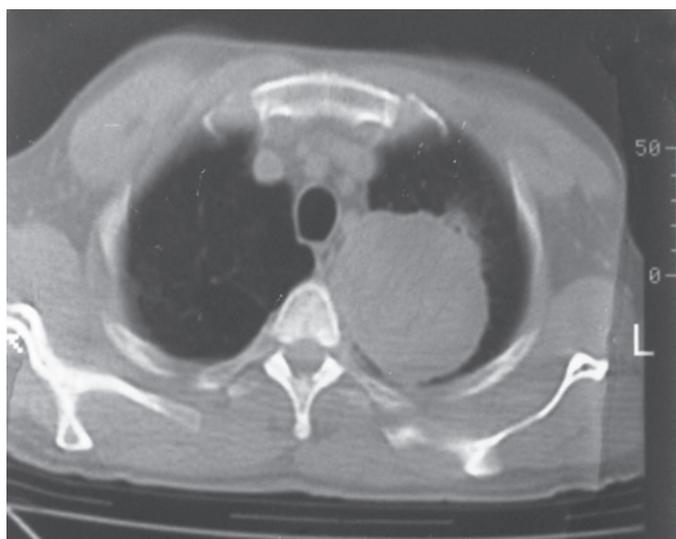


Figure 2: Computed tomography scan showing a 7-cm lobar tissue process in contact with the esophagus and vessels, without pleural or mediastinal invasion.

patients is fortuitous discovery on a routine chest X-ray may show an isolated parenchymal nodule or perihilar mass associated with a mediastinal lymph node, these images are better characterized on CT and MRI scan to specify the exact place of the tumor mass, degree of extension, the state of the underlying lung parenchyma and guide the percutaneous biopsy, but are usually unspecific [1, 3].

The diagnosis is based on two elements, firstly a negative complete search of myeloma, secondly, on histological examination of the surgical specimen (the case of our patient), biopsy transparietal, more rarely on the cytology of bronchoalveolar lavage or trans-bronchial biopsies [1].

Histological study will objectify webs of tumor plasma cells morphologically variable from the mature form to the atypical immature form. A complement by immunohistochemistry allows the identification of intracytoplasmic monoclonal immunoglobulins in tumor cells [1, 2, 4].

The treatment remains extended resection, performing mostly lobectomy with lymph node dissection. Radiotherapy for inoperable or incomplete surgical resection, a dose between 40 Gy and 50 Gy allows a good local control. Chemotherapy has little benefice in this disease, it is especially recommended for diffuse forms, multiple locations, in case of aggressive histological form, therapeutic alternative for patients with inoperable or lack of local control after first treatment surgery or radiation [1, 2, 5–8].

The prognosis is difficult to establish, given the rarity of the condition and the reduced number of cases described in literature. However, the five-year survival is around 40% with an average survival of seven years [2, 8, 9].

CONCLUSION

Pulmonary plasmacytoma is a rare form of PEM (plasmacytome extramédullaire) with varied and unspecific clinical and radiological expression. The myeloma search results, bone marrow biopsy, protein electrophoresis, 24 proteinuria, and renal function was negative. The standard treatment is extended surgical resection and the prognosis is difficult to establish.

Author Contributions

Soufya Majdoul – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Lahmamssi Chaimaa – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Nadia Benchakroun – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

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Zouhour Bourhaleb – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Zineb Bouchbika – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

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Souha Sahraoui – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Abdelatif Benider – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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