A Pseudo-Mesothelioma Pleural Revealing a Carcinoma Urothelial Metastatic: a Case and Review of the Literature

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ABSTRACT

The authors illustrate through the observation of an aggressive and exceptional pleural evolution metastatic of a carcinoma urothelial of the upper urinary tract at the source of an atypical and rarely described chest ray aspect of pseudo-mesothelioma. In our case, the instillation with the BCG Pasteur by the percutaneous nephrostomy and the pleurX in favor of a heavy chemotherapy have enabled us to circumvent the evolution towards the acute complications related to this pathology, the malignant pleuresis.

Keywords: BCG, Chemotherapy, Differential diagnosis, Mesothelioma, Radiotherapy, Surgery, Urothelial carcinoma

1. INTRODUCTION

Urothelial carcinomas occur in over 90% in the bladder, but can also affect the pan (about 5% of all kidney tumors), ureter and urethra(1). They give exceptionally pleural metastasis since, in more than 75%, it is secondary to primary malignancies of pulmonary origin, gynecological diseases, and lymphoma(2).

The authors describe here the first Malagasy case of urothelial carcinoma of the upper urinary tract in pleural metastatic, provided with a chest ray discovered belatedly, and discuss differential diagnoses of the image and the evolution of this tumor treated with a topical adjuvant agent while reviewing recent literature.

2. CASE

Mr. RAV. 53 years old, a non-smoking man, was hospitalized for progressive worsening dyspnea which lasted six months, accompanied by basi-left chest pain. A recent medical history and physical examination, we noticed that he used to take regularly herbs in decoction with a clinical and medical use, an alteration of the general status (PS = 3 according to WHO) and a left pulmonary syndrome without condensation fever. The chest Xray showed a left scalloped and thickening pleural picture. Chest CT (Figure 1) confirmed the pleural lesions secondary aspect and abdominopelvic CT scan for staging (Figure 2) found a retroperitoneal mass compatible with a primitive renal tumor located on the right. Biologically, there was an LDH assay which raised to 1423 IU / ml (5 times normal). Histological examination of a biopsy transthoracic puncture confirmed the location of a secondary urothelial carcinoma at the pleura (pT4N2M1) (Figure 3). Our patient had received a course of BCG instillation Pasteur by percutaneous nephrostomy, and the tear-X (thoracic drainage system) then died after three months from the weakening of his general condition, following the natural evolution of the tumor.
Fig. 1: Chest CT scan showing regular pleural thickening with scalloped aspect of pleura revealing malignant pleural mesothelioma

Fig. 2: Abdominal CT scan showing UTUC infiltrating the renal parenchyma, and which is also for staging

3. DISCUSSION

Upper tract urothelial carcinoma (UTUC)

The UTUC entities are rare and account for about 5% of urothelial carcinoma all reported worldwide\(^3\). The incidence of UTUC finds its peak among the 70 and 80 years old persons, with an average age of diagnosis amongst the 65-70 years people\(^3\). The early age of discovery of the UTUC among the Malagasy population can be explained by the fact that the population is young. They most commonly affect men with a sex ratio of 1.5 to 2.8 in Europe and the United States during the period of 1997 to 2010\(^3,4\). Our observation is the first case reported in Madagascar, and no similar study is found in the Malagasy literature where the incidence of TVES is still unknown in our country.

The bladder tumors and the UTUC have in common the same risk factors, while smoking is widely incriminated with RR 2 or 3 compared to non-smoking persons\(^4\). The decoction of plants is the etiologic agent found in our observation and could be the source of our sporadic cases. A risk factor similar to those found in the Balkan nephropathy and Chinese herbs recognized and reported in the literature since 1950\(^3\). UTUC are discovered incidentally in 10 to 16% of cases due to a series of waning in abdominal imaging performed for another reason\(^5\). Pleurisy operating in a context of an impaired general condition enabled us to discover renal tumor after scannographic etiologic. Our case is a circumstance of discovery rarely reported in the literature and demonstrates advanced or metastatic UTUC\(^6\). Other more specific functional signs are indicative of these tumors such as hematuria (68-82%), pain (20-30%) or lumbar mass (10%)\(^3\).

According to the recommendation of the AFU and the UAE (grade C), the USSR (flexible ureterorenoscopy) allows at the same time to make the diagnosis (biopsy, cytology in situ) as well as to make conservative treatment of UTUC\(^7\). Morphologically, the uro-scanner potentiated by furosemide injection is the reference imaging modality with a sensitivity and specificity of around 96% and 99% as against 50 to 60.5% for IVU\(^8\). MRI can replace the uro-scanner but is not realized as first-line diagnosis or staging as we observed\(^8\).

Fig. 3: M/E, HE*100 urothelial carcinoma infiltrating the pleura

Pleural metastasis of urothelial carcinoma

If the bladder carcinomas are known to provide multiple forms of the thoracic metastatic disease: solitary or multiple nodules, infiltrates segmental, or more rarely, Pancoast syndrome, acute respiratory distress syndrome, sarcoidosis pseudo-appearance, or excavations lung. The pleural metastatic location is very unusual and rarely indicative of the disease. Rare clinical cases are reported in the literature. L.Odier et al. reported a similar observation with unilateral pleural involvement, of with pseudo mesothelioma appearance. Postmortem studies suggest that pleural carcinomatosis lesions are secondary to lymphatic or blood-borne spread or mixed tumor emboli. These attacks carry an aspect of pleural thickening ensheathing scalloped tumor or associated with pleurisy. These radiological lesions pose a differential diagnosis problem with mesothelioma and other pleural metastatic affected (adenocarcinoma, squamous cell carcinoma, sarcoma, melanoma, lymphoma). The diagnosis of these disorders is based on immunohistochemical examination of a pleural biopsy and has a prognostic value, the therapeutic and forensic importance for patients exposed to asbestos.

Management of metastatic urothelial carcinoma

The treatment of metastatic urothelial carcinoma is based on the instillation of topical agents adjuvants (BCG or mitomycin C), chemotherapy (MVAC: Methotrexate, Vinblastine, Cisplatin Adriamycin and) and / or external beam radiation therapy. These treatments are mainly based on the transposition of the management principles of bladder tumors. We decided, in our case, the BCG instillation Pastor by percutaneous nephrostomy and the tear-X in favor of a heavy chemotherapy prior to the alteration of the general state of our patient and in consideration of the absence of technical platform radiotherapy in our center.

4. CONCLUSION

This case illustrates a rare and fatal pleural metastasis of urothelial carcinoma of the upper tract manifested by atypical Xray picture appearance of pseudomesothelioma. Nevertheless, we consider that our choice of therapy is judiciable in a developing country with a fragile health system given the prognosis of metastatic urothelial carcinoma according to the EBA report 2014.

REFERENCES