SAS Journal of Medicine
Abbreviated Key Title: SAS J Med
ISSN 2454-5112
Journal homepage: https://saspublishers.com

OPEN ACCESS

Respiratory Disease

Testicular Metastasis of a Lung Cancer

H. Jabri[1*], R. Cherkaoui[1], A. Boumehdi[1], H. Arfaoui[1], W. Elkhattabi[1], H. Afif[1]

[1]Respiratory Disease Department Hospital 20 August 1953

DOI: 10.36347/sasjm.2022.v08i08.002 | **Received:** 12.06.2022 | **Accepted:** 26.07.2022 | **Published:** 03.08.2022

***Corresponding author:** H. Jabri
Respiratory Disease Department Hospital 20 August 1953

Abstract **Case Report**

Testicular metastases are rare, accounting for about 1% of testicular cancers. Among the metastatic localizations of lung malignant tumors, the testis are seldomly encountered. In this work, we report a case of testicular metastasis of a lung adenocarcinoma in a 45-year-old patient. Our observation underlines the interest of a meticulous and complete clinical examination of the patients, in order to diagnose even rare secondary localizations.

Keywords: Lung Cancer - Metastases - Testicular.

INTRODUCTION

Primary bronchopulmonary cancers metastasize mainly to the brain, liver, adrenals, bones and skin. Testicular localization is exceptional [1].

Testicular metastases are rare, accounting for about 1% of testicular cancers [2]. The most frequent primary site is the prostate. Other less frequent primary sites are described such as: lung, kidney, colon and stomach [1].

We report a case of testicular metastasis of a lung adenocarcinoma.

OBSERVATIONS

The patient was Mr C.M, 62 years old, a chronic smoker with 54 PA, treated for pulmonary tuberculosis and declared cured 10 years ago.

The patient consulted with dyspnea evolving for 3 months and becoming stage 3 mMRC, associated with a pain under the left scapular of the type of point of side without irradiation, with a productive cough bringing back whitish sputum and two episodes of hemoptysis of small abundance. This symptomatology evolved in a context of apyrexia and altered general condition.

The clinical examination revealed a right submandibular adenopathy of three cm long axis, firm, painless, mobile with respect to both superficial and deep planes, in addition to a large painful left bursa with negative transillumination.

Chest radiography showed a homogeneous dense hilar-projecting opacity with an internal boundary embedded in the mediastinum and a poly-lobed external boundary (Figure 1).

Chest CT scan showed a left mediastino-pulmonary process with mediastinal adenopathy and a swollen left adrenal gland (Figure 2).

In front of this radio-clinical picture, the most probable diagnosis was a bronchogenic carcinoma with cervical, bone and testicular lymph node metastases. Other diagnoses were raised, pulmonary, cervical lymph node, bone metastasis of a testicular neoplasia. Bronchogenic carcinoma with cervical lymph node and bone metastases associated with a primary testicular involvement, either benign or malignant, and lastly an infectious origin, in particular a pseudo-tumoral and multifocal tuberculosis.

To support these diagnoses, a flexible bronchoscopy showed a tumor-like infiltration of the mucosa of the entire left bronchial tree significantly reducing the caliber of all its orifices, with spontaneous bleeding. The histological study of the lobar spur biopsy showed a primary pulmonary adenocarcinoma expressing CK7 and not expressing TTF1 on immunohistochemical study.

The scrotal echography showed a hypoechoic, homogeneous, well-limited testicular mass with a long axis of 1.26 cm (Figure 3). The BHCG and alpha feto protein blood tests were normal. An orchiectomy was performed and the histological study showed an adenocarcinoma of pulmonary origin.

The cervical echography showed an isolated 1.3 cm short-axis adenopathy in the right Ib territory (Figure 4). The biopsy of the submandibular adenopathy also showed a secondary location of his pulmonary carcinoma.

In the extension workup, the bone scan showed several bone lesions in the right femur and the 5th metatarsal of the left foot. Cerebral CT and abdominal ultrasound were normal.

The diagnosis was primary pulmonary adenocarcinoma with testicular, cervical lymph node, adrenal and bone metastases. It was classified (according to the 2018 TNM classification) T4N2M1c, i.e., a stage IV b.

After multidisciplinary concertation, the treatment decided was a palliative chemotherapy based on cisplatin associated with gemcitabine.

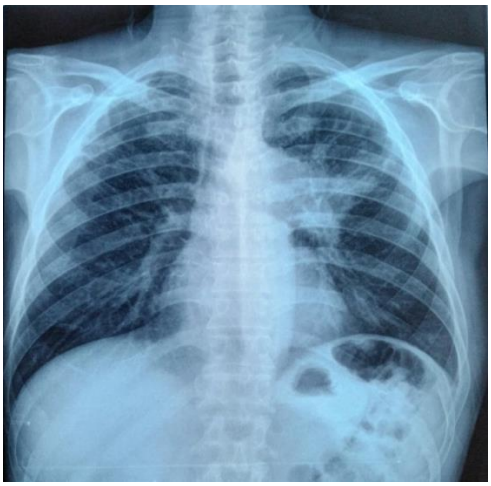

Figure 1: Frontal chest X-ray: homogeneous dense hilar-projecting opacity with an internal boundary embedded in the mediastinum and a poly-lobed external boundary

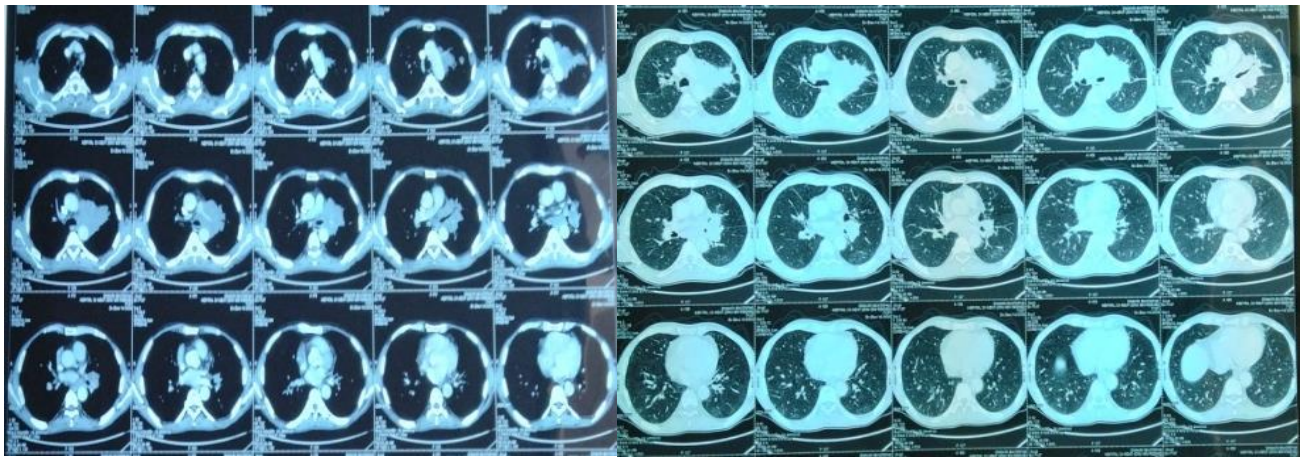

Figure 2: Chest CT: left mediastino-pulmonary process with mediastinal adenopathies

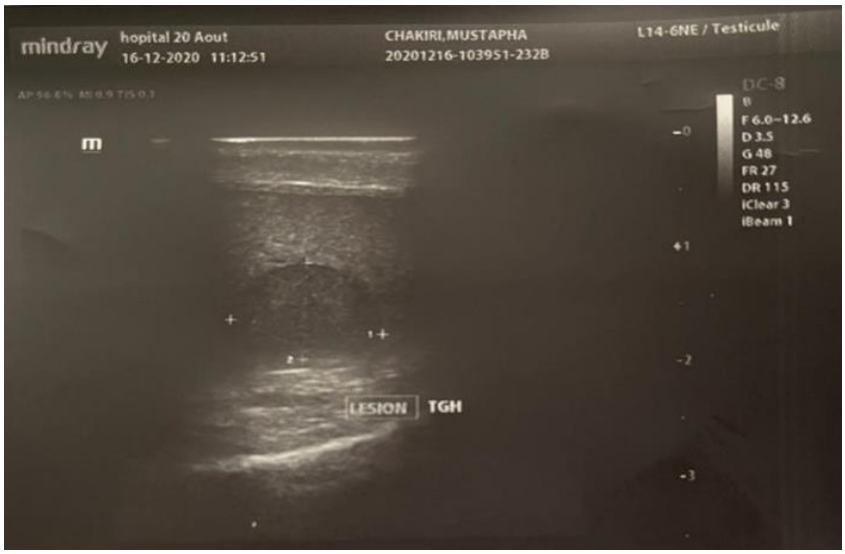

Figure 3: Testicular echography: a hypoechogenic, homogeneous, well-limited testicular mass of 1.26 cm long axis

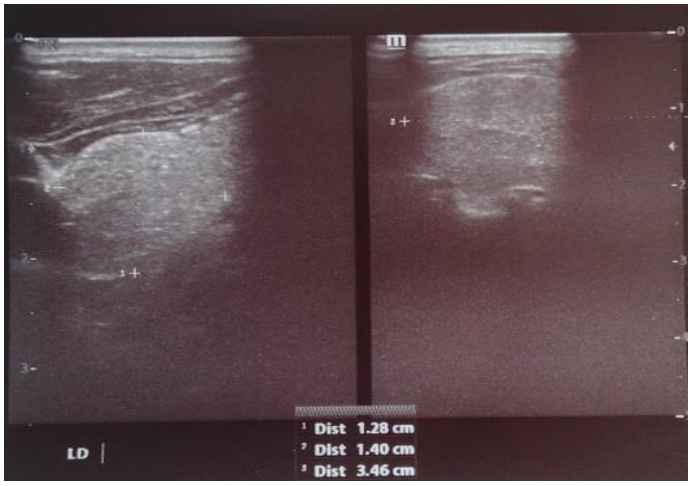

Figure 4: Cervical echography - isolated adenopathy of the right Ib territory of 1.3 cm of small axis

DISCUSSION

Testicular metastases are extremely rare, most often discovered incidentally at autopsy in patients who have died of cancer [1], with an overall prevalence of 0.68% [3].

Metastatic testicular damage occurs by several routes, either retrograde in the lumen of the vas deferens, or by arterial, lymphatic, retrograde venous or direct local extension [4]

The rarity of these testicular metastases could be explained by the relatively low temperature of the scrotum and the resulting thermal difference thus limits metastatic dissemination to the testicles via the bloodstream [5]. Clinically, they manifest as a large pouch that is usually painless. Palpation of the testicles reveals a mass or nodule, which can be confirmed by scrotal ultrasound. Only anatomopathological study could confirm the diagnosis.

In our patient, the testicular localization of the pulmonary process was diagnosed in parallel and confirmed by immunohistochemistry, which remains exceptional and makes the particularity of our medical observation and thus underlines the interest of a complete and meticulous clinical examination.

There is no consensual management, the treatment is based on surgical excision: enlarged inguinal orchiectomy and treatment of bronchogenic carcinoma depending on age, general condition and stage [1].

Looking back at the literature, a study conducted by Price & al in 1957 on 76 patients with a secondary testicular tumor, the pulmonary origin was 18% [6].

In another study carried out by Edward & al over a period of 40 years between 1930 and 1970, it was found that there were 15 cases of secondary testicular cancer, 0.03% of which were of pulmonary origin [7].

And according to Ulbright *et al*., in a study conducted in 2008 and involving 26 patients with testicular metastases, the pulmonary origin represented 7.6% [1].

CONCLUSION

The metastatic sites of lung cancer are dominated by brain, liver, bone, adrenal and skin metastases. Testicular metastasis remains exceptional. Our observation underlines the interest of a meticulous and complete clinical examination of the patients, in order to diagnose even rare secondary localizations.

REFERENCES

1. Ulbrith, T. (2008). Metastatic carcinoma to the testis. *The American journal of surgical pathology*.
2. Pienkos, E. J., & Jablokow, V. R. (1972). Secondary testicular tumors. *Cancer*, *30*(2), 481-485.
3. Wang, G. (2019). Metastatic carcinoma to the testis-a mini review. *Journal of Rare Diseases Research & Treatment*, *4*(2).
4. McWilliams, W. A., Zein, T. A., Koppelnick, M., & Young Jr, J. D. (1983). Testicular metastasis from carcinoma of prostate. *Urology*, *21*(6), 570-572.
5. Benchekroun, A., Kasmaoui, E. H., Ghadouane, M., Jira, H., Lachkar, A., Marzouk, M., & Faik, M. (2001, January). Métastase testiculaire d'un adénocarcinome prostatique. À propos d'un cas. In *Annales d'urologie* (Vol. 35, No. 4, pp. 234-236). Elsevier Masson.
6. Price, E. B. (1957). Secondary carcinoma of the testis. *Cancer*, 10592-595.
7. Pienkos, E. J., & Jablokow, V. R. (1972). Secondary testicular tumors. *Cancer*, *30*(2), 481-485.