Skin Metastases: Revealing a Lung Adenocarcinoma

Leila Nebchi1*, Naamani Chaher2

1Department of Orthopedic Surgery, EPH Thénia hospital center in Boumerdes and Faculty of medicine Alger1; 2Department of Pathological Anatomy, in faculty of médecine Alger1

ABSTRACT

Muscle metastases from bronchopulmonary cancer are rare; their revealing character is an exceptional fact. We report the observation of a muscular metastasis of the right arm, revealing a totally asymptomatic bronchial adenocarcinoma. The reason for our patient’s consultation was a painful mass in the right arm. Imaging concluded that there was heterogeneous muscle collection without any erosion of the cortical bone of the humerus. The histological study of the tumor, after surgical excision, concluded in a metastasis of an adenocarcinoma, whose immune histochemical profile oriented towards a broncho-pulmonary or digestive origin. The chest X-ray was normal. Apart from the surgical excision of the muscle metastasis, the treatment included local consolidation radiotherapy associated with palliative chemotherapy. The evolution was marked by the absence of local recurrence, with nevertheless a dissemination of the lung cancer after 7 months of evolution patient deceased. Skeletal muscle metastases from lung cancer are rare and have a poor prognosis.

Keywords: Skeletal muscle; Bronchopulmonary cancer; Chemotherapy

INTRODUCTION

Skeletal muscle metastases from lung cancer are rare and their revealing nature constitutes an exceptional fact. We report the case of a skeletal muscle metastasis of the right arm revealing pulmonary adenocarcinoma in a 64-year-old man, totally asymptomatic with a normal chest X-ray. Patient of the 64 year old, with no particular pathological history, smoking 1 packet per day, initially consulted in the orthopedic department for a very painful swelling of the isolated right arm, evolving for 1 month. Physical examination revealed a deep mass in the posterolateral compartment of the right arm, 9 cm in long axis, of firm consistency, painful on palpation (Figure 1).

Correspondence to: Leila Nebchi, Department of Orthopedic Surgery, EPH Thénia hospital center in Boumerdes and Faculty of Medicine Alger1, E-mail: nebchi@yahoo.fr

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CASE PRESENTATION

The ultrasound of the right arm showed a juxta-humeral muscle collection of $5 \times 9$ cm (Figures 2 and 3). The radiograph of the right humerus showed no bone damage (Figure 4). A large surgical biopsy removing the entire lesion en bloc was performed. Macroscopically, it was a friable, yellowish, finely encapsulated tumor of the vastus lateralis muscle (Figures 5-8). Histopathological and immunohistochemical examinations of the surgical specimen concluded that muscle metastasis of an adenocarcinoma could be of pulmonary or digestive origin (Figures 9-14). The chest X-ray was considered normal; the thoraco-abdomino-pelvic scanner (Figure 15).

Figure 2: No bone involvement.

Figure 3: Aspect and ultrasound report: Concluded: Deep intramuscular tumor formation of the triceps brachii muscle.

Figure 4: Deep intramuscular tumor formation of the triceps brachii muscle report.

Figure 5: At the incision normal aspect of the superficial fibers of the Triceps muscle.

Figure 6: Encephaloid aspects of the deep muscle fibers of the triceps during surgery.

Figure 7: CK7 positive x40.
Figure 8: Negative desmin x10 (positive striated muscle internal control).

Figure 9: Pools of mucin: alcian blue (x10).

Figure 10: Hematoxylin and eosin staining (x10).

Figure 11: AML negative x10 (positive internal control).

Figure 12: Report of the immunohistochemical study.

Figure 13: CT appearance.

Figure 14: Thoraco-abdomino-pelvic CT report.
They are exceptionally revealing of the primary tumour, as in the case of our patient. They are plurilocal in 40% of cases and can theoretically affect all the muscles. However, they are more common in the psoas muscle, diaphragm, and muscles of the abdominal wall, pectoral, deltoid, thigh muscles, intercostals, sternocleidomastoid, biceps, triceps and backbones. Clinically, these metastases can manifest as pain of varying intensity, a tumor mass syndrome associated or not with extra-articular stiffness. Imaging makes it possible to make the diagnosis of muscle tumor, but without being able to decide on its metastatic character. In ultrasound, muscle metastases appear in the form of heterogeneous hypoechoic images, more or less well limited. Computed tomography reveals a mass of spontaneously hypodense tissue density, taking up the contrast heterogeneously, with the possibility of necrotic areas and calcifications. On MRI, these lesions are isodense in T1 sequence, hyperdense in T2 sequence, surrounded by peripheral edema, and their signal is strongly enhanced after injection of contrast product. However, this appearance is nonspecific and can be seen in the event of a primary tumour, abscess, hematoma or intramuscular collection. We did not perform either a CT scan or an MRI of the arms in our patient [16-18]. The anatomo-pathological diagnosis of muscle metastases can be made by needle biopsy, under ultrasound or CT scanning, or by surgical biopsy, then allowing en bloc excision of the tumour. The treatment of skeletal muscle metastases remains poorly codified. Surgical excision associated with local radiotherapy allows symptoms to be controlled and the quality of life of patients to be improved by reducing or eliminating muscle pain. If the primary tumor is controlled, the association with palliative chemotherapy would allow a relatively prolonged survival. Some observations have reported a partial improvement of symptoms with exclusive radiotherapy. The prognosis of muscle metastases remains pejorative, particularly during the evolution of lung cancer.

CONCLUSION

Muscle metastases from lung cancer are rare; they are exceptionally revealing. Clinically, these metastases are revealed by a tumor mass syndrome, pain with or without extra-articular stiffness. They are rare for any tumor with a reported incidence greater than one percent. The most common sites of muscle metastases are the thigh muscles, ilioiopsoas and paraspinal muscles. Treatment is poorly codified. However, surgical excision associated with local radiotherapy allows control of symptoms and a certain improvement in the quality of life of patients. Imaging does not offer specific signs. The diagnosis is based on the anatomo-pathological study after surgical excision biopsy.

REFERENCES


