

Skeletal Muscle Metastasis from Transitional Cell Carcinoma of the Urinary Bladder

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Abstract

Case Report

Skeletal metastasis from bladder cancer is very rare. The treatment is usually palliative based on chemotherapy and/or radiotherapy. Surgery is made in only some cases. We present a rare case of a 64-year-old patient with single metastasis to rectus abdominal muscle from transitional cell carcinoma of the urinary bladder.

Keywords: Bladder, skeletal, metastases, transitional cell carcinoma.

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INTRODUCTION

Skeletal muscle metastases (SMM) are a rare condition of malignancy that occurs in less than 2% of all metastases. Those from urothelial carcinoma are extremely rare and up to date only a few cases have been reported in the literature [1-4].

CASE PRESENTATION

We report the case of a 64-year-old man with a history of smoking, who consulted for hematuria with pelvic pain. The clinical exam was normal. Pelvic-ultrasound showed the presence of a 5mm budding tumor in the bladder apex. Endoscopic resection was performed. The histology exam concluded to a transitional cell carcinoma of the urinary bladder grade II, classified as PT1a. The patient underwent 6 cycles of BCG therapy. Nine months later, he consulted for the appearance of an abdominal mass measuring 75 mm. A thoracic-abdominopelvic computed tomography (CT) scan showed the presence of a heterogeneous mass measuring 60 mm embedded in the right rectus abdominal. The mass was suspicious. The bladder looks healthy, and there is no distant metastasis. The biopsy of the mass with histological examination revealed a skeletal metastasis from urothelial carcinoma. We concluded to a unique metastasis of urothelial carcinoma of the bladder without local recurrence of the primary tumor. The patient had an excision of the mass with invaded margins in the definitive histological exam. Then he received adjuvant chemotherapy based on 3 cycles of methotrexate, vinblastine, and cisplatin (MVAC) with local

radiotherapy at the dose of 30 Gy. The patient was lost to follow-up after in a good general condition.

DISCUSSION

Primary transitional cell carcinoma of the bladder is a relatively common tumor, that gives usually metastases to regional lymph nodes, bones, lung, and liver [5,6], but muscles constitute a rare site of metastases. It tends to be found at an advanced stage of malignancy but it can be the first sign of advanced disease [1,4]. Our case is interesting, due to the early stage, and the full remission of the primary tumor in the local site, however the patient developed a single and rare metastasis in skeletal muscle.

The reason for the rarity of that metastasis is the resistance of skeletal muscle to metastatic disease. These factors include the acidic pH muscle, local changes in oxygenation, lactic acid accumulation, muscle contractility that induce tumor destruction, blood flow, and local temperature [1,3,4].

Skeletal metastasis can occur in the whole body, but generally, they occur in the largest muscles such as the psoas, gluteals, and the erector spinae that represent the most common sites of the metastases [6].

SMM does not have a clinical characteristic presentation, but most lesions are painful. It may be an incidental finding on radiological examination because most of the lesions identified were neither painful nor palpable [1,6,7].

The differentiation between a primary soft tissue tumor and metastatic carcinoma is difficult without biopsy, but if the mass is painful and anatomically accessible to surgical excision we prefer to remove the tumor for diagnosis and treatment [2,4].

Radiological findings are not specific to differentiate skeletal metastasis of primitive tumor or other muscle disorders. CT scans show muscle enlargement but cannot specify this as malignant. Magnetic resonance imaging (MRI) is helpful for the differential diagnosis from primary soft tissue tumors [3,6].

Histological examination after the resection mass or biopsy and the use of immunohistochemical markers such GATA3, CK20, p63 and cytokeratin (CK) 5/6 can confirm the diagnostic and differentiate urothelial skeletal metastasis from the others skeletal mass [4].

The outcomes of the patients with skeletal metastasis are poor mostly, due to lack of consensus on treatment options. The treatment depends on the clinical setting and the condition of the patient. In fact, in case of solitary lesion or painful, excision may improve the quality of life and relieve pain and also may prolong the survival time, such in our case. In the other cases, treatment is palliative including chemotherapy and /or radiotherapy that also may control the pain and the size of the lesion. The dose of radiotherapy is depending on the location and depth of the lesion, which an average of 40–50 Gy [2,4,6].

The prognosis of those patients is poor because the skeletal metastasis has a worse prognosis than another site of metastasis. The patient's survival has a mean duration of 8 months (1, 4).

CONCLUSION

Muscular metastases from urothelial tumors are very rare. These unusual metastases may be seen

after many years of radical treatment. Clinical and radiological features are not specific. The confirmation of the diagnosis based on biopsy. The treatment is usually palliative. The prognosis remains poor.

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