



Bladder tumour as a first manifestation of metastatic choroid melanoma

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ABSTRACT

Incidence of melanoma has been increasing, being able to metastasize to any organ with variable clinical presentation and evolution. We present the case of a patient with choroid melanoma metastasis to the bladder, managed by transurethral resection of the bladder with apparent full excision, additional investigation identified probable peritoneal and pulmonary metastases. Further exams revealed a stable pulmonary lesion and no peritoneal disease. Patient was proposed for surveillance. Treatment of metastatic melanoma is variable, some advocate metastasectomy for single metastasis, others systemic therapy or radiotherapy. Regardless of treatment options and new treatments the prognosis of metastatic disease is markedly unfavourable.

1. Introduction

Primary melanoma of the bladder is a rare event with less than fifty cases described with no apparent gender preference and accounting for 0.2% of all melanoma. For the diagnosis of primary melanoma of the bladder to be made the presence of an active or regressed lesion must be excluded by a detailed history and physical exam.

Virtually all types of cancers can metastasize to the bladder, although, bladder metastasis range from 0.1 to 6.2% of bladder cancers, being an infrequent event. In some autopsy series incidence of bladder metastasis of melanoma was 18%. Only 15% of patients with bladder metastases presented with symptoms, haematuria being the most common. Metastatic pattern is variable with some patients showing a single lesion while other shows multiple disperse lesions with variable lesion pigmentation.

The presence of metastatic disease signifies a worse prognosis for the patient, with limited therapeutic options and overall survival of six months. Skin metastases appear to have a more favourable prognosis comparing to organ metastases, bladder metastases due to the low number of reports do not yet have prognostic value.

2. Clinical case

A 73 years old male, with a history of left eye enucleation for choroid melanoma 6 years before this episode, with no clinical or imaging signs of recurrence, was referred for a urological appointment for gross

haematuria with a history of 2 months and a bladder ultrasound suspicious for a 4cm lesion on the cupula of the bladder. The patient had no other lower urinary tract symptoms. Present morbidities were gout, hypertension, heart failure and dyslipidaemia. Due to the imaging findings, a transurethral resection of the bladder (TURB) was proposed and accepted by the patient. Cystoscopy was not performed. The working diagnosis was urothelial carcinoma as it is the most common bladder tumour. During bladder examination, a 5cm pediculated necrotic lesion on the cupula of the bladder was identified (Fig. 1). Multiple other lesions were identified, more than ten, all ovaloid in shape, with a regular surface and a dark brown colour (Fig. 2). At the following physical exam, the patient did not reveal any suspicious lesions for melanoma on the skin. The TURB was complete in extension and depth of all lesions, revealing a high cellular, heavily pigmented malignant epithelioid tumour. The cell had a large, irregular nuclei with a prominent nucleolus. Tumour cells showed expression of vimentin, Melan-A, S-100 protein and HMB-45, and were negative for AE1-AE3. Histology revealed mostly pt1 lesions with detrusor on the sample (Fig. 3). PET-FDG18 was performed revealing suspected pulmonary and peritoneal metastasis, and watchful waiting was proposed as the patient was asymptomatic. Patient repeated PET after six months revealing no peritoneal metastasis and stable left pulmonary lesion. Control cystoscopy at 3 months showed no new lesions and the patient was then proposed for surveillance, with contrast CT, PET and cystoscopy. The disease is stable at the moment.

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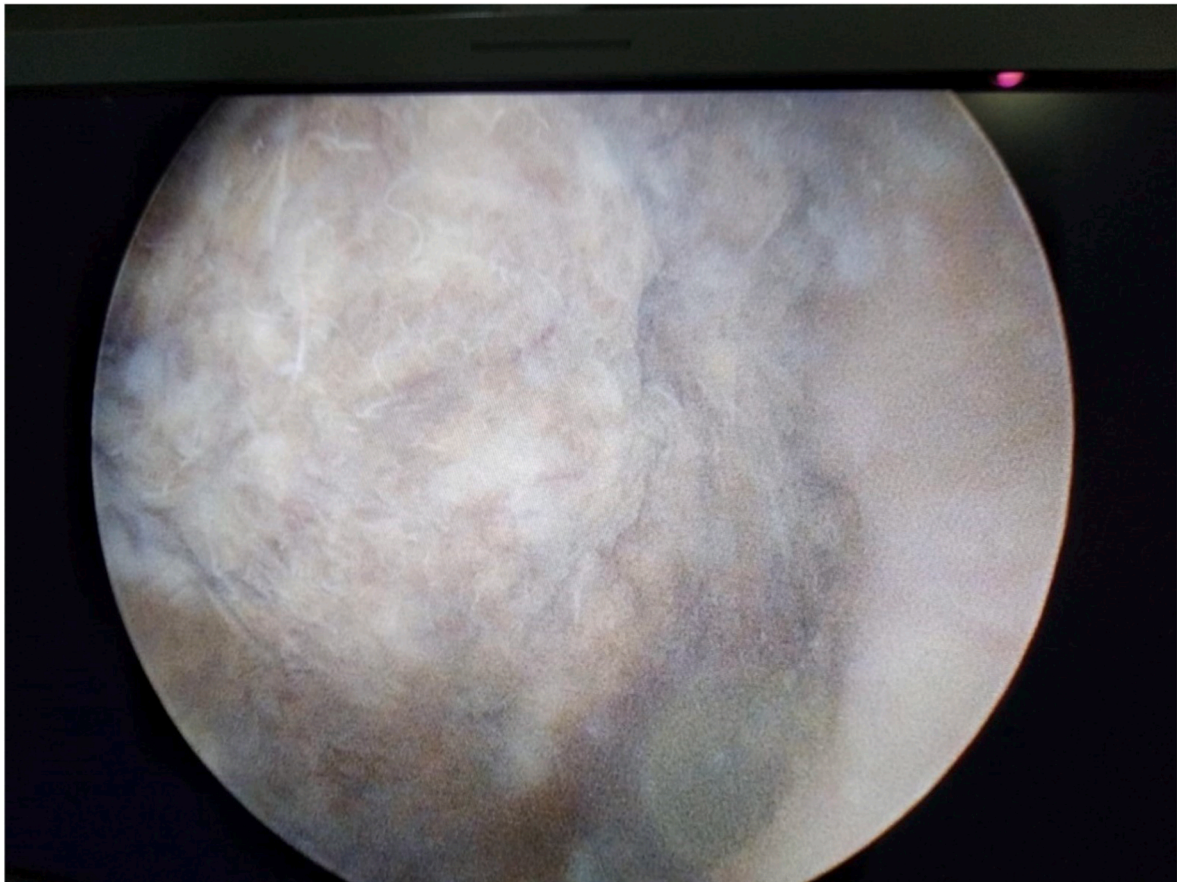


Fig. 1. Main lesion.



Fig. 2. Secondary lesion.

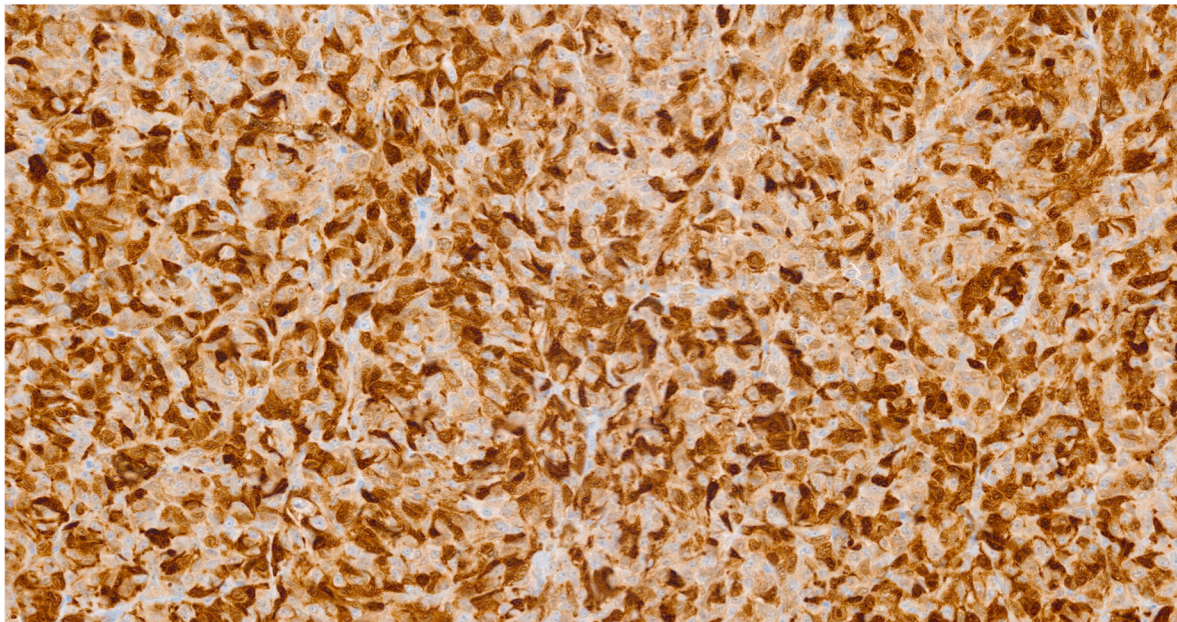


Fig. 3. Immunohistochemical staining for Melan-A and S-100 (x200).

3. Discussion

Differential diagnosis was made with other tumours of the bladder and bladder metastasis. Urothelial cancer is the most common neoplasm of the bladder in favour of this diagnosis was the fact that the patient was

male and 73 years old, known risk factors, although no history of smoking or exposure to known bladder carcinogens was known. The presence of an identifiable lesion on ultrasound, haematuria and the fact that this is the most common type of bladder lesion made this the initial working diagnosis. The personal history of choroid melanoma, although

without signs of new lesions for six years made this a possible diagnosis although unlikely at the time, due to the rarity of bladder metastases. Treatment of metastatic melanoma is variable, some authors advocate metastasectomy for patients with single metastasis while others recommend systemic therapy or radiotherapy.¹ The incidence of melanoma has increased in the last decades, being responsible for 4–7% of all cancers diagnosed in the United States of America.² Melanoma can disseminate to any organ, with variable clinical presentation and evolution. The most common secondary locations are local regional lymph nodes, lungs, liver and brain.¹ Bladder metastases of melanoma are very rare, with less than forty cases described in the literature. Autopsy studies of patients that died from melanoma showed rates of bladder metastatic in up to 18%. Choroid melanoma is the second most common type of melanoma (after cutaneous), being the most frequent intraocular tumour in the adult.³ The authors of this article found only six cases of metastasized choroid melanoma to the bladder.⁴ Patients with metastases localized to the bladder and good performance status may benefit from radical cystectomy, although the overall maximum reported survival was of 3 years. The role of traditional chemotherapy in metastatic melanoma is limited, as little survival benefit is achieved, currently, first line chemotherapy involves the use of alkalinizing agents such as.

Dacarbazine with response rates of 20–30% and limited durable response.⁵ The use of immunotherapy with programmed death receptor-1 inhibitors such as nivolumab and pembrolizumab allowed for

prolonged survival in 35–40% of patients, although some patients present primary resistance or develop resistance allowing for disease progression.⁵ Regardless of treatment options and the appearance of new treatments for melanoma, the prognosis of metastatic disease is markedly unfavourable in most reports. The fact that our patient presented with localized lesions to the bladder makes this an atypical case. The lesions identified in PET, particularly the peritoneal lesion that later disappeared, could have been the result of bladder fluid leakage and inflammatory response due to bladder perforation that later resolved. The stable lesion on the lungs was non-specific and non-detectable on CT.

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