ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep734

A Case of Malignant Melanoma with Bladder Metastasis

Sabin Yadav; Manash Chakraborty; Michalis Iosifidis; Haitham Abdelmoteleb

Urology Department, University Hospital of Wales

Publication Date: 2025/09/20

Abstract: Metastatic malignant melanoma involving the urinary bladder is an exceptionally rare finding. We report the case of a man in his mid 70's who initially presented with stroke-like symptoms. A CT head revealed multiple metastatic lesions with no clear primary origin. Subsequent imaging of the chest, abdomen, and pelvis showed widespread metastases, with lesions in the bladder raising suspicion of it being the primary site. Rigid cystoscopy and transurethral resection of bladder tumour (TURBT) were performed, and histopathology confirmed malignant melanoma. Further investigation supported the diagnosis of metastatic melanoma. The patient was started on corticosteroids, Encorafenib, and Binimetinib. Although he initially responded well to treatment, his disease progressed both clinically and radiologically, and he sadly passed away 10 months after his initial presentation.

How to Cite: Sabin Yadav; Manash Chakraborty; Michalis Iosifidis; Haitham Abdelmoteleb (2025) A Case of Malignant Melanoma with Bladder Metastasis. *International Journal of Innovative Science and Research Technology*, 10(9), 1006-1008. https://doi.org/10.38124/ijisrt/25sep734

I. INTRODUCTION

Malignant melanoma is characterized by the dysplastic proliferation of melanocytes and its diagnosis relies primarily on clinical assessment along with histopathological examination of a biopsy sample. The incidence rate of Malignant melanoma is rapidly rising.[1] The treatment depends on the staging and options available include surgical excision, immunotherapy, gene therapy, and biochemotherapy . [2] Metastasis of Malignant melanoma to the Urinary bladder remains a rare occurrence; hence, case reporting and continued research are essential to improve outcomes for our patients.

II. CASE PRESENTATION

A man in his mid 70's presented to the emergency department with a 4-week history of progressive weakness.

His medical history included:

- Hypertension
- A previous basal cell carcinoma treated with Mohs surgery two years prior
- He was also awaiting a dermatology appointment for a suspicious blue nevus on his left cheek; a shave biopsy later confirmed cutaneous malignant melanoma

III. INVESTIGATIONS

The initial differential diagnosis included stroke, and a CT head performed revealed multiple brain metastases of unknown primary origin. (Fig.1)

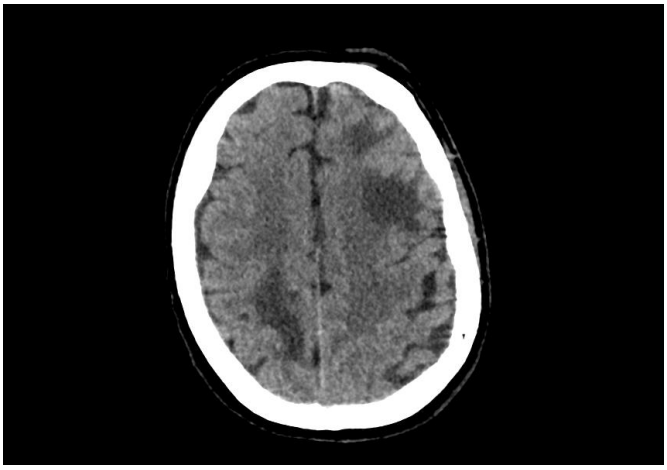

Fig 1: CT Heat Demonstrating Metastatic Lesions

To identify the source of the metastases, a CT of the thorax, abdomen, and pelvis was performed on Day 2, which showed. (Fig.2)

- Bilateral pulmonary emboli
- Suspicious lesions in the spleen, both kidneys, jejunum, and urinary bladder
- Bilateral popliteal deep vein thromboses (DVTs) on Doppler ultrasound (Fig.3)

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep734

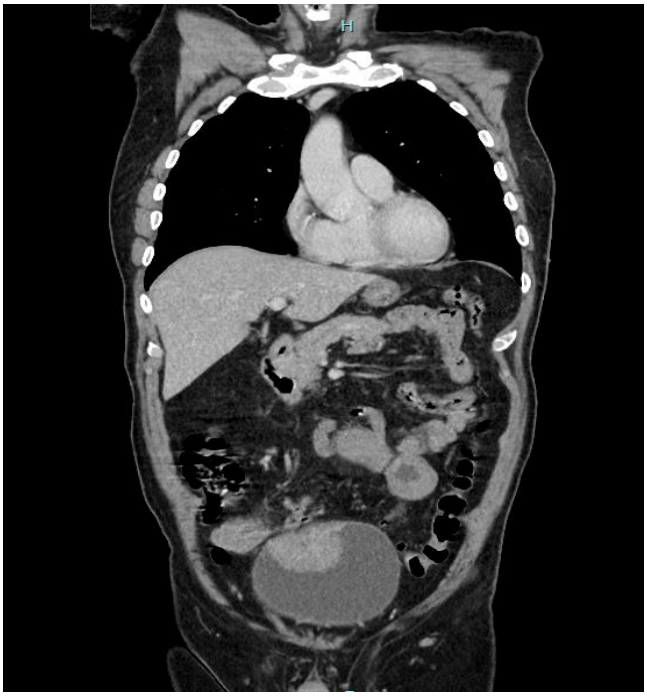

Fig 2: CT TAP Demonstrating Polyploid Tumor at Right Superior Anterior Aspect of Urinary Bladder Along with Thickened Small Bowel and Associated Pathological Lymphadenopathy

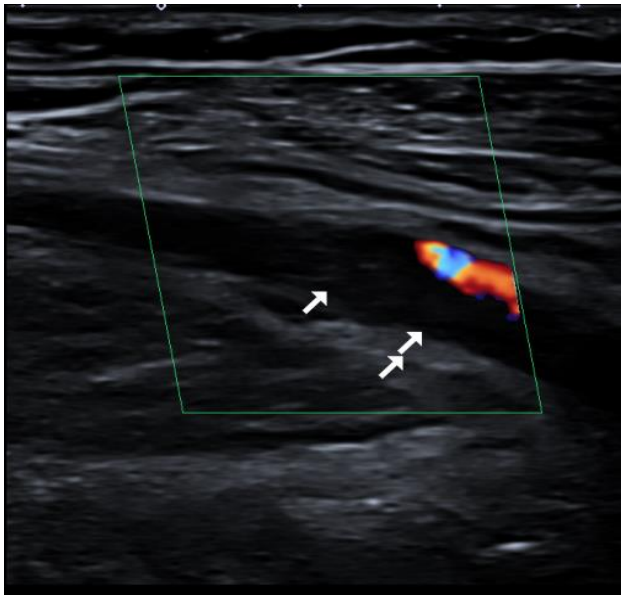

Fig 3: Doppler Scan Demonstrating DVT in Right Popliteal Vein

➢ *Differential Diagnosis*

Given the initial presentation with stroke-like symptoms, our main differential was a cerebrovascular event. However, once the CT head revealed brain metastases, we considered malignancy of unknown primary. The widespread nature of the metastases seen on further imaging—particularly involving the lungs, kidneys, spleen, jejunum, and bladder—led us to consider possible primaries in the lung, renal tract, gastrointestinal system, or bladder. The bladder appeared to be the most likely source at the time, but histology and further testing confirmed the diagnosis of metastatic malignant melanoma.

➢ *Treatment*

The urinary bladder was suspected to be the primary site. The patient was commenced on therapeutic dalteparin and underwent temporary inferior vena cava (IVC) filter insertion on Day 3.

On Day 4, a transurethral resection of bladder tumour (TURBT) was performed to obtain tissue samples. Histopathology, immunohistochemistry, and genetic testing confirmed the diagnosis of malignant melanoma.

He was started on high-dose corticosteroids, Encorafenib, and Binimetinib on day 31 from the day of presentation to the hospital.

➢ *Outcome*

He showed an initial good response for approximately 8 months, after which disease progression was noted. He passed away 10 months after initial presentation

IV. DISCUSSION

Malignant melanoma is the 5th most common cancer in the U.K and is responsible for 1% of all cancer related deaths. [3] It has a natural tendency for distant metastasis with the most common sites being the regional nodes, liver, lungs and brain. However, metastasis to the bladder is rare. Although, among the tumours metastasizing to the bladder, Malignant melanoma is one of the most frequent. [4] Roughly, 29 cases of malignant melanoma metastasis to bladder have been reported in the last 30 years. [5] This number seems to be an underrepresentation, as demonstrated by an autopsy series which identified metastasis to bladder in 37% of malignant melanoma cases. [4]

Clinically most patients with metastatic malignant melanoma to the bladder are asymptomatic making it challenging to diagnose. It is comparatively straight forward if there is a clinical history of confirmed malignant melanoma. Given most patients are asymptomatic, it is recommended to pursue further investigation in the form of a flexible cystoscopy if there are any urinary symptoms (Haematuria, dysuria, pollakiuria, suprapubic pain and urinary retention) in patients who have a confirmed diagnosis of malignant melanoma. [6]

In this case the patient was waiting for a review from the dermatology team regarding a blue nevus. However, with the clinical presentation and initial imaging it was thought to be a primary bladder tumour with widespread metastasis. Transurethral resection of bladder tumour was undertaken and tissue samples were obtained. Immunohistochemical analysis and genetic testing confirmed malignant melanoma. He was then discussed in MDT and started on Encorafenib and Binimetinib along with steroids, which improved his symptoms and gave him a good quality of life. Unfortunately, after 10 months he had disease progression and passed away shortly.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep734

This patient was diagnosed with widespread metastasis of malignant melanoma in 1 month of initial referral with suspicion of dermatological malignancy. Unfortunately, this is a case of delayed presentation with widespread metastasis highlighting the importance of early suspicion and investigation of suspicious lesions in early stage.

Malignant melanoma metastasis to the bladder is rare and there is lack of evidence to support any specific treatment modality. Hence, the management should be dictated by an MDT approach after considering patient wishes, comorbidities, functional status. The treatment modality can vary from observation, transurethral resection, and even cystectomy in addition to the systemic therapeutic agents.[7]

V. CONCLUSION

Malignant melanoma metastasis to the Urinary bladder is a rare and aggressive condition with a poor prognosis. This case underscores the importance of early suspicion and timely investigation of atypical presentations, even in the absence of urinary symptoms. A multidisciplinary approach as demonstrated in this case is crucial for managing such complex cases as it allows for individualised treatment plans that consider patient wishes and overall health.

Due to its rarity continued research and case reporting are essential to improve diagnostic tools and treatment options

REFERENCES

[1]. Sanchez JA, Robinson WA. Malignant Melanoma. Annu Rev Med. 1993;44:335-42. Doi: 10.1146/Annurev.Me.44.020193.002003. PMID: 8476254.

[2]. Ahmed B, Qadir MI, Ghafoor S. Malignant Melanoma: Skin Cancer-Diagnosis, Prevention, And Treatment. Crit Rev Eukaryot Gene Expr. 2020;30(4):291-297. Doi: 10.1615/Critreveukaryotgeneexpr.2020028454. PMID: 32894659.

[3]. Cancer Research UK Www.Cancerresearchuk.Org/Health-Professional/Cancer-Statistics/Statistics-By-Cancer-Type/Melanoma-Skin-Cancer#Heading-One. Accessed 03/03/2025

[4]. Stein BS, Kendall AR. Malignant Melanoma Of The Genitourinary Tract. Journal Of Urology [Internet]. 1984 Nov 1 [Cited 2025 Mar 3];132(5):859–68. Available From: Https://Doi.Org/10.1016/S0022-5347(17)49927-7

[5]. Anandrati M, Maini V, Asarian A, Xiao P. Metastasis Of Malignant Melanoma To The Urinary Bladder & Descending Colon: A Case Report And Literature Review. Urol Case Rep. 2024 Nov 7;57:102883. Doi: 10.1016/J.Eucr.2024.102883. PMID: 39583334; PMCID: PMC11585788.

[6]. Boughaleb A, Kubiak M, Bourimi C, Tariqi R, Leroux PA, El Kentaoui H. Melanoma Metastasis To The Bladder: A Case Report Of An Underdiagnosed Entity. Int J Surg Case Rep. 2024 Sep;122:110048. Doi: 10.1016/J.Ijscr.2024.110048. Epub 2024 Jul 17. PMID: 39033701; PMCID: PMC11325074.

[7]. Patil RV, Woldu SL, Lucas E, Quinn AM, Francis F, Margulis V. Metastatic Melanoma To The Bladder: Case Report And Review Of The Literature. Urol Case Rep. 2017 Jan 10;11:33-36. Doi: 10.1016/J.Eucr.2016.10.017. PMID: 28083484; PMCID: PMC5225280.