A Pathological Surprise in the Urinary Bladder

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**ABSTRACT**

Though urothelial tumours form a majority of Urinary Bladder neoplasms, occasional surprises do occur. Some of these do not have a characteristic presentation. They may be detected incidentally. Here we present a case of bladder paraganglioma which did not have the characteristic symptoms and signs of catecholamine excess. Hence the final pathological diagnosis was a pathological surprise.

**Keywords:** Paraganglioma Urinary Bladder, Asymptomatic, Soft Tissue Tumours Urinary Bladder

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**INTRODUCTION**

There are a variety of bladder tumours with their varied presentations. Most of them though tend to be urothelial carcinomas; there are many benign neoplastic lesions as well. Here we report one such rare case of bladder paraganglioma.

**CASE REPORT**

Gopalakrishnan, 65 year old male non smoker non alcoholic patient had presented to OPD with AUR one month back which had been managed by catheterization at a local hospital. There was history of haematuria preceding this acute urinary retention. He had no other urological complaint. Patient was a known diabetic and a history of coronary artery disease and there was a history of carcinoma tongue for which surgery done was done in 2007. Physical examination was unremarkable and so were his routine investigations. No functional tests were done as no symptom or sign suggestive of catecholamine excess was seen at the presentation. USG abdomen had shown a hypoechoic lesion of size 1.5 x 2.2 cm seen in the left lateral wall and further imaging with CECT revealed well defined soft tissue density polypoidal lesion measuring 19.8 x 18.4 x 17.3mm noted in the antero-inferior wall of urinary bladder towards midline with intraluminal extension without any calcification. Moderate enhancement on arterial phase with persistent enhancement on delayed images was present but without any regional lymphadenopathy. Cystoscopy revealed a smooth bulge of 2 x 2 cm in size in the anterior wall and mucosa over it being normal, no biopsy was taken. Partial cystectomy was done on 20th August 2016 for this intramural lesion with 1.5 cm margin around. During the surgery, there were fluctuations in blood pressure with handling of the tumor. Specimen was sent for HPE (Figure 1). The post op period was uneventful and patient is on regular follow up.

Gross specimen: yellow circumscribed mass area 1.7 x 1.2 x 1cm size


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carcinoma. However, it is not related to any familial syndrome. Since paraganglia are distributed throughout the bladder wall, it can be found in any part of the bladder. They are mostly well circumscribed, and they form single small nodules, ranging from a few millimeters to a couple of centimeters. Multiple tumor nodules or tumoral aggregates are seen as well. Usually it is firm with a tan or dark brown cut surface. Placing the tumor in a Zenker's fixative turns the tumor to black in color; a positive chromaffin reaction helps in the gross diagnosis of the tumor. Microscopy can demonstrate what appears to be invasion of muscularis propria of the bladder wall, but on this basis alone the tumor SHOULD NOT be regarded as malignant. Immunohistochemistry (IHC) stain shows NSE, chromogranin, and synaptophysin. CD56, OCT4, S100 are positive in cells encircling the tumor cells (sustentacular cells).

Vimentin is mostly positive in benign PGLs. Less than 7% UB paragangliomas are malignant. Absolute criterion for malignancy is the demonstration of metastasis. These express fewer neuropeptides than benign ones and have lower or absent S100 expression. Metastasis is mainly to regional lymph nodes, lungs and liver. High-grade urothelial carcinoma with a nest pattern, melanoma and carcinoid tumor come in its differential diagnosis. Immunohistochemical stains are useful in helping to establish these diagnoses.

Presentation: As with other bladder tumors, hematuria is quite common. Persistent hypertension may be present and is quite specific. Since the paraganglioma secretes catecholamines, symptoms of headache, sweating, tremulousness, anxiety, and micturition syncope (the temporary loss of consciousness upon urinating).

In serum and urine markers of catecholamine excess can often help in the diagnosis.

Partial cystectomy is the treatment of choice.

END NOTE

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Editor’s Remarks: Considering urinary bladder wall tumours Paragangliomas are rare tumours seen occasionally. When the characteristic symptoms and signs are present clinical suspicion is easy and diagnosis is often made promptly. Here the patient was asymptomatic and the pathological diagnosis came as a surprise. The case is reported for the unusual presentation of an uncommon case.

REFERENCES