Primary Localized Amyloidosis of Urinary Bladder Mimicking the Bladder Cancer: A Case Report

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Amyloidosis is defined as the extracellular deposition of abnormal protein fibrils in various tissues. It can be either localized to an organ or generalized. Amyloidosis of the urinary bladder is a rare histopathological finding. It is important to know that such cases mimic as bladder cancer in clinical, radiological, and even endoscopic presentation to a great extent. Here, we discuss a case of a 46 -year-old gentleman who presented with gross hematuria not associated with pain or any other urinary problems. His cystoscopic findings showed papillary growth in the urinary bladder. Histopathologic samples of the transurethral resection of the mass proved to be primary bladder amyloidosis.

Keywords : bladder cancer, hematuria, primary urinary bladder amyloidosis.

Amyloidosis refers to a non-neoplastic heterogeneous group of disorders related to the extracellular deposition of insoluble fibrils in different organs.[1] It can be primary, secondary, and hereditary. Amyloidosis can be systemic, which is usually progressive and fatal or localized. Localized amyloidosis of the urinary bladder is rare, with the most extensive series reported 31 case.[2] The clinical importance of bladder amyloidosis is that it mimics bladder cancer. Although amyloidosis is a benign condition, it was associated with urothelial carcinoma in 48% of the cases.[3] Here, we present a case of localized bladder amyloidosis with a review of the literature.

Case Report

A 46-year-old gentleman presented to out patients department with the complaint of passage of blood mixed urine off and on for past 1 year. He had no other associated urinary complaints like burning micturition, frequency, urgency or nocturia. He had no any systemic illness nor under any medications. On examination patient was vitally stable and well oriented. Patient was earlier managed in some other center. His urine examination revealed plenty of red blood cells and urine culture had no any organism growth. The ultrasound abdomen pelvis showed mild irregular and thickened urinary bladder likely of reactive cystitis, and also grade I prostatomegaly. Transrectal ultrasound detected no other abnormalities. CECT abdomen and pelvis showed asymmetrical enhancing urinary bladder wall thickening, likely of malignant thickening, with no suspicious lesions elsewhere in the abdomen **(Figure 1)**. Cystoscopy done showed sessile, papillary, solitary mass extending from 12 to 3 o'clock to anterolateral wall, bleeding points seen and few blood clots also noted. Transureteral resection of the bladder tissues done and sent for histopathological examination and also for AFB staining and tissue gene Xpert. The biopsy report showed features suggestive of Cystitis cystica, with no evidence of malignant cells. AFB staining was also negative for tubercular pathology and urine cytology showed no evidence of any urothelial carcinoma.

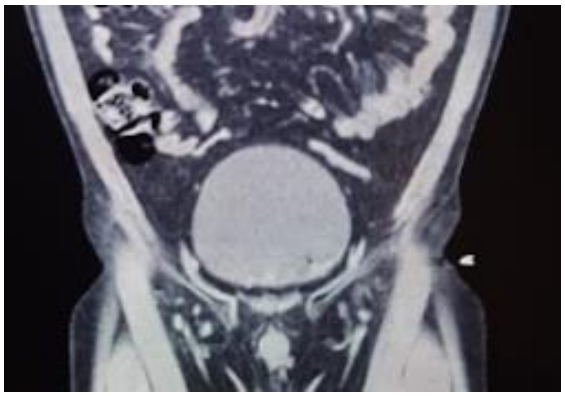

Figure 1 : CECT abdomen and pelvis showed asymmetrical enhancing urinary bladder wall thickening, likely of malignant thickening

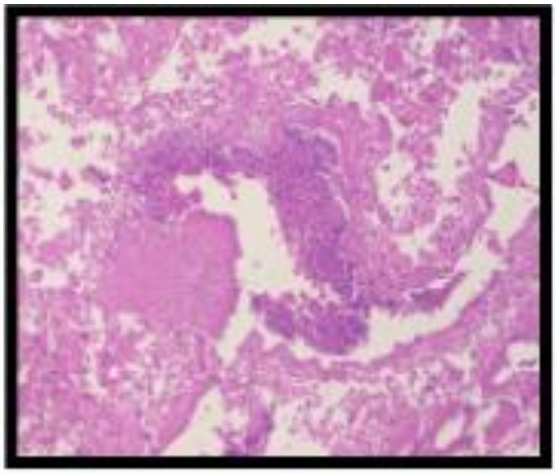

Figure 2: Urinary bladder tissue with deposition of amorphous material

In our center, we repeated the cystoscopy and found there was multiple erythematous lesions and growth noted in the done and right anterolateral wall of urinary bladder, hyper vascular with few blood clots. Complete resection of the lesions done,

and fulgarization was done to the unhealthy-looking bladder mucosa. The biopsy report of the specimen showed urinary bladder tissue with deposition of amorphous material positive for congo red stain, confirming the diagnosis of Amyloid deposition in the urinary bladder **(Figure 2)**. Patient was consulted with physician and further work up was done in the line of amyloid related systemic disease, which came out to be negative. Patient was followed up in out patients department after 3 months and flexible cystoscopy done to see if any residual bladder lesions or any regrowth in the bladder, which showed normal healthy mucosa with no abnormalities. Patient is advised for cystoscopy every year for 3 years.

Discussion

Urinary tract amyloidosis is rare and bladder primary bladder amyloidosis has approximately 200 cases reported worldwide.[4] The cause of this in unknown but it is often associated with the chronic inflammation and cystitis. Bladder amyloid classically presents with painless visible haematuria, irritative and storage bladder symptoms, mimicking bladder malignancy.[5] Imaging techniques like Ultrasound, CT scan, and MRI are initial methods to evaluate patients with urinary bladder amyloidosis. Cystoscopic examination shows appearances ranging from ulcerated masses to diffuse thickening. Urine cytology cannot distinguish amyloidosis from carcinoma because of the subendothelial location of most amyloid deposits and limited sensitivity for urothelial carcinoma. Definitive diagnosis of amyloidosis is achieved with biopsy.[6] In this case, histological tissue was confirmed by the presence of apple-green birefringence on Congo red staining when viewed with polarised light, as seen in this similar case report where tissue resected from the urinary bladder showed staining with alkaline Congo red revealed a salmon pink appearance and apple green birefringence was detected under polarised light.[4]

After primary localized amyloidosis has been diagnosed, it is important to rule out any presence of systemic amyloidosis and consultation with specialist is advised.[7]

Treatment is transurethral resection for localized bladder amyloid. The recurrence rate is high as 50% hence subsequent cystoscopy is recommended. There are no definitive clinical guidelines regarding the length of follow up, it has been suggested to follow up with cystoscopy every 1–3 years.[4]

Conclusion

Urinary bladder Amyloidosis can mimic bladder cancer in presentation. It is very important for Urologists to be aware of

this rare condition which will allow patients to receive proper investigations and management in time.

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