Primary Amyloidosis of the Urinary Bladder: A Case Report

Liwen Zhao a,1, Lu Jin a,1, Jing Quan a, Xiang Pan a, Lijun Zhou b, Jian Peng b, Zebo Chen b, Shangqi Yang b, Xiangming Mao b, Yongqing Lai b,*,

a Anhui Medical University, Hefei, Anhui 230032, China
b Department of Urology, Peking University Shenzhen Hospital, Shenzhen, Guangdong 518036, China

ARTICLE INFO
Article history:
Received 27 February 2017
Accepted 16 March 2017

Keywords:
Amyloidosis
Transurethral resection
Hematuria

ABSTRACT
Primary amyloidosis of the urinary bladder is a rare disease, with only approximately 200 cases reported in the literature. We herein present a case of amyloidosis of the urinary bladder with painful gross hematuria. Pelvic Computed Tomography showed uneven thickening of the bladder wall suspicious of neoplastic lesion. Cystoscopy and transurethral resection were performed. Congo-red staining confirmed amyloidosis it was. Postoperative recovery was good and close follow-up was recommended after discharged. Amyloidosis is usually benign, while it can masquerade as a malignancy. Doctors should consider it when imaging studies reveal a malignancy in bladder.

INTRODUCTION
Amyloidosis is characterized by extracellular deposits of the fibrillar protein, amyloid.1 Most researchers consider it as a metabolic disease.2 The main symptoms are painless gross or microscopic hematuria, dysuria and irritative voiding symptoms. The diagnosis can be confirmed by the positive staining of Congo-red. Recurrence rate post-resection is estimated to be as high as 54%.3 Amyloidosis can masquerade as a malignancy. The caseremind doctors of differential diagnosis when imaging studies reveal a malignancy in bladder.

CASE PRESENTATION
A 70-year-old woman, presented with painful gross hematuria for 1 day without urinary frequency, urgency and dysuria. There was no positive finding about past medical history and personal history. There was also no positive finding while carrying out physical examinations. The results of a urinalysis were consistent with infection, and Escherichia coli was positive in a urine culture.

Other laboratory examinations were negative. Pelvic Computed Tomography showed uneven thickening of the bladder wall suspicious of neoplastic lesion (Fig. 1). According to these evidences, carcinoma was considered. Following doctors’ recommendation, cystoscopy and transurethral resection were performed. Cystoscopy revealed localized uplift of the posterior wall and hematoma formed on the surface of the bladder. The pathologic examination demonstrated localized atypical hyperplasia, infiltration of lymphocytes and eosinophils. The tissue was not fibrotic in nature, as evidenced by negative Masson’s trichrome stain and reticular fiber stain. The diagnosis of amyloidosis was presented with positive of Congo-red stain (Fig. 2). The patient
recovered rapidly and discharged 4 days after operation. Following up with cystoscopy was recommended. Hematuria and other urinary symptoms did not happen during the follow-up period. And we find no recurrence according to the cystoscopy.

Discussion

Primary amyloidosis of the urinary bladder is a rare disease, with only approximately 200 cases reported in the literature. The mechanism of amyloidosis of urinary tract is still unknown. There are mainly two theories. Most researchers consider abnormal metabolism of protein as the main reason of amyloidosis. While another opinion is that chronic urinary tract infection or repeated inflammation of mucosa or submucosa cause the disease. The disease is almost evenly distributed over the fifth, sixth and seventh decades of life in men, whereas it is diagnosed in the sixth decade of life in most women.

Amyloidosis does not present its own specific manifestations, and it can masquerade as a malignancy. Most patients complain about painless gross hematuria, while patient herein presented with painful gross hematuria. It could be related to infection of urinary tract. Imaging studies and cystoscopy won’t provide much help for making definitive diagnosis while it masquerades as a malignancy. Definitive diagnosis depends largely on histopathology.

Amyloidosis can divides into primary and secondary forms. Secondary amyloidosis always occurs as a complication of an underlying chronic inflammatory process, with rheumatoid arthritis being the one mostly associated. And other parts of the body are often involved when suffered from secondary amyloidosis. Obviously, patient we presented denied medical history of chronic inflammation. And there was no evidence supporting that another organ suffered from amyloidosis. So, we made the definitive diagnosis with primary amyloidosis.

The first-line treatment of primary amyloidosis is surgical excision. Intravesical instillation of dimethyl sulfoxide and oral colchicines therapy have also been performed with promising result. Patient we presented has taken no measures of adjuvant therapy postoperation, but she remains disease-free 8 months after operation.

Conclusion

Primary amyloidosis of the urinary bladder is a rare disease, imaging studies and cystoscopy can not distinguish it from malignancy. Biopsy is necessary to make a diagnosis. Surgical excision is the first-line therapy. Because of the high recurrence rate, regularly cystoscopy is recommended.

Consent

The images collected in this article have been agreed by the parties.

Conflict of interest statement

We declare that we have no financial and personal relationships with other people or organizations that can inappropriately influence our work, there is no professional or other personal interest of any nature or kind in any product, service and/or company that could be construed as influencing the position presented in the manuscript entitled.

References

1. Huang CY, Shun CT, Huang KH, et al. Primary amyloidosis of the urinary bladder. J Formos Med Assoc. 2006;105(2):164–167.
2. Pan D-L, Na Y-Q. Amyloidosis of the unilateral renal pelvis, ureter and urinary bladder: a case report. Chin Med Sci J. 2011;26(3):197–200.
3. Chan ES, Ng CF, Chui KL, et al. Primary bladder amyloidosis—case report of a patient with delayed upper urinary tract obstruction 3 years after the diagnosis. Amyloid. 2010;17(1):36–38.
4. Kobayashi T, Roberts J, Levine J, Degrado J. Primary bladder amyloidosis. Intern Med. 2014;53:2511–2513.
5. Benito P, Fernandez I, Perez-Carral JR, et al. Secondary bladder amyloidosis a new case report. Arch Esp Urol. 2012;65:699–702.