Case Report

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Xanthoma of the Bladder - A Rare Entity

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Abstract

Xanthoma is a non-neoplastic lesion caused by an abnormal focal aggregation of lipid-containing histiocytes in tissues. Typically associated with hyperlipidemia, it can also be observed in patients with normal lipid levels. Bladder xanthoma is a rare lesion. It is usually asymptomatic and is usually encountered incidentally. It may be isolated or associated with urothelial carcinoma of the urinary bladder. In this case report, we present an incidental case of bladder xanthoma in a 64-year-old patient who underwent surgical treatment due to lower urinary tract symptoms and an investigation of the etiology of hematuria.
Keywords: Xanthoma, bladder xanthoma, cystoscopy, hyperlipidemia, case report

Introduction

Xanthoma is an abnormal focal accumulation of lipid-containing histiocytes in tissues. It is not a true neoplasia but a benign condition characterized by reactive histiocytic proliferation secondary to serum lipid abnormalities, which can be observed in patients with primary or secondary hyperlipidemia (1). Although evidence shows that it is generally associated with a high lipid profile, it may also be observed in patients with a normal blood lipid profile and as part of the inflammatory process secondary to surgery or trauma (2). Xanthomas are most commonly seen in the skin, subcutaneous tissue, tendons, and gastrointestinal system. Bladder localization of xanthomas is a rare condition (2,3). In this case report, we aimed to present a rare case of bladder xanthoma in the light of the literature and to contribute to the literature.

Case Report

A 64-year-old male patient was admitted to our urology outpatient clinic with complaints of decreased urinary flow, frequent urination, and intermittent hematuria for approximately 6 months. In his history, it was learned that he had previously received different long-term medical treatments in other centers for these complaints. The patient had no other chronic diseases or medications. The routine urologic examination of the patient was unremarkable except for a smoothly circumscribed enlarged prostate tissue on the finger rectal examination. Laboratory values revealed high serum total prostate-specific antigen (PSA) value (33.7 ng/mL) and erythrocyte cell counts on urinalysis. The lipid profile of the patient was within normal limits as triglyceride: 131 mg/dL, cholesterol: 154 mg/dL, high density lipoprotein: 36 mg/dL, low density lipoprotein: 92 mg/dL. In the uroflowmetry evaluation, the maximum urine flow rate was 3.7 mL/sec, and the amount of post-mictional residual urine was 400 mL. Urinary ultrasonography revealed no pathological features except for enlarged prostate tissue infante to the bladder. The patient was foley catheterized. Multiparametric prostate magnetic resonance imaging (MRI) was planned as further imaging evaluation due to the high PSA value. MRI showed approximately 155 cc prostate tissue indented to the base of the bladder. Peripheral and transitional zone evaluations revealed PIRADS 2 and 3 lesions in some locations. The bladder lumen and surrounding tissues have no pathological appearance. Cognitive fusion biopsy was performed from suspicious prostate areas according to MRI. Prostate tissue biopsy pathological results showed benign prostatic hypertrophy/chronic inflammation foci. Surgical intervention was planned for patients with high International Prostate Symptom Score and lower urinary tract symptoms (LUTS). On cystourethroscopy, the prostatic lobe appeared as a closed trilobe. In the bladder, a yellow-white soft tissue structure with a total load of approximately 15 mm was observed 4 cm superolateral to the right ureteral orifice (Figure 1). Transurethral resection was performed on these foci, and specimens were sent for pathological examination. The patient

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was discharged on postoperative day 2. Histopathological examination revealed foamy cytoplasm infiltrating into the lamina propria under normal urothelium. The final pathological diagnosis was bladder xanthoma (Figure 2). Patient consent was obtained for the case reports to be published for academic purposes.

Discussion

Bladder xanthoma is a very rare, non-neoplastic lesion. Since the first description by Miliauskas (1), very few cases have been reported. Most patients with bladder xanthoma do not present with prominent symptoms and are usually detected incidentally on imaging examinations or cystoscopic examinations performed on complaints of hematuria, suprapubic pain, and LUTS (2). It may be associated with a bladder tumor or found in isolation (2). In the clinical analysis of multicentric cases in a single series by Li et al. (3), the male-to-female ratio was 2.1:1, the mean age was 60.8 years, and the mean tumor diameter was 21 mm. Lipid profile disorder was noted in approximately 46% of patients. According to the literature, concomitant urothelial carcinoma is present in 50% of cases. In these cases, low-grade urothelial carcinoma is usually observed (3). However, cases of high-grade urothelial carcinoma have also been reported (4,5). On cystoscopic examination, they are generally described as velvety yellow-white lesions with pedicles (6,7). Histopathological differentiation of bladder natoma from other conditions is important for correct diagnosis and treatment planning. In the differential diagnosis, xanthogranulomatous cystitis, malakoplakia, and stony ring cell carcinoma should be considered (3,8). Treatment of lipid metabolism abnormalities, if any, is recommended. Considering the clinical symptoms related to the lesion in the urinary bladder and the possibility of urothelial carcinoma, surgical resection is recommended as both diagnostic and therapeutic according to the literature (3). Nishimura et al. (6) and Chitale et al. (7) made the diagnosis using punch biopsies in their study, and there was no change in the shape or size of the lesions in control cystoscopy performed 6 months later. No recurrence was observed in patients who underwent transurethral resection and in those who underwent control cystoscopy. Recurrence or increase in lesion size was not reported in cases associated with bladder tumors (2,3). Patient-based cystoscopic follow-up can be performed considering whether xanthoma is isolated or associated with urothelial carcinoma, the size of the lesion and the treatment applied. Xanthomas are not premalignant lesions, and long-term follow-up is not recommended (9,10). In our case, there was no lipid metabolism disorder. This was an isolated bladder xanthoma, and the data were compatible with the literature in terms of age, gender, and lesion size. Complete transurethral resection was performed in accordance with the literature. No recurrence or new tumor formation was detected in the 3rd month control cystoscopy.

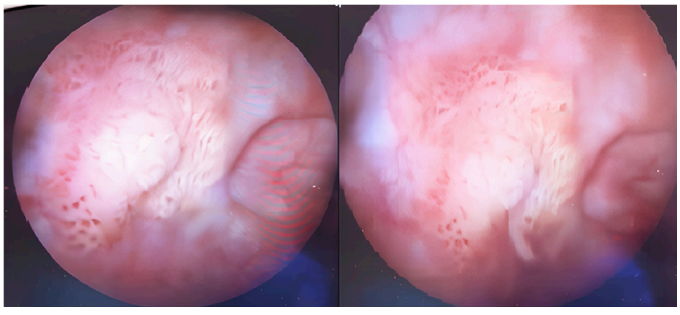

Figure 1. Images of the lesion during cystoscopy

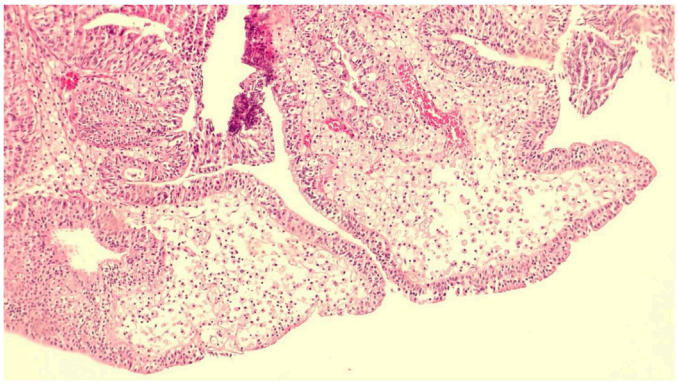

Figure 2. Under the benign urothelial epithelium, dense foamy histiocytes are observed in the lamina propria (hematoxylin and eosin stain x100)

Conclusion

Xanthomas of the urinary bladder are very rare benign lesions. They are usually detected incidentally. Patients with xanthomas should be evaluated for underlying disorders of lipid metabolism. Transurethral resection is both diagnostic and therapeutic because half of the patients have a concomitant bladder neoplasm. There are no premalignant lesions, and long-term follow-up is not required. In the differential diagnosis, xanthogranulomatous cystitis, malakoplakia, and signet ring cell carcinoma should be examined immunohistochemically.

Ethics

Informed Consent: Patient consent was obtained for the case reports to be published for academic purposes.

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Contribution: There is not any contributors who may not be listed as authors.

Footnotes

Authorship Contributions

Surgical and Medical Practices: M.A.D., H.S., Ş.K., S.A., A.F.V.,

Concept: M.A.D., A.F.V., Design: M.A.D., Data Collection or Processing: M.A.D., H.S., A.F.V., Analysis or Interpretation: M.A.D., Ş.K., S.A., Literature Search: M.A.D., H.S., Writing: M.A.D., H.S., A.F.V.

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