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Physiology and Anatomy

Elixir Physio. & Anatomy 134 (2019) 53598-53599

ISSN: 2229-712X

Inflammatory Myofibroblastic Tumor of the Bladder: A Rare Case Report

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ARTICLE INFO

Article history:
Received: 26 June 2019;
Received in revised form:
29 August 2019;
Accepted: 9 September 2019;

Keywords
Inflammatory myofibroblastic tumor,
Bladder,
Hematuria,
CT.

ABSTRACT
Inflammatory myofibroblastic tumor (IMT) is an uncommon condition that is rarely encountered in the urinary tract. It is considered as an intermediate neoplasm according to the WHO classification. It can occur in different organs: lung, pancreas, mesentery and uterus. The localization in the bladder is unusual. We report a case of IMT of the urinary bladder in a 32 years old male who presented with hematuria, treated by partial cystectomy and diagnosed by histopathological analysis of the operative piece.

Introduction

Inflammatory myofibroblastic tumor of the bladder is a benign proliferate lesion which can simulate clinically and histologically a sarcoma. It is a rare benign myofibroblastic proliferation that has been given several designations, including inflammatory pseudotumor, inflammatory pseudosarcomatous fibromyxoid tumor, nodular fasciitis, pseudosarcomatous myofibroblastic tumor, and fibromyxoid pseudotumor. Most of the patients are young, and the most common symptom is hematuria evoking wrongly a malignant process.

Here in, we report a case of IMF of the urinary bladder in a 32 years old male presented with hematuria, diagnosed by histopathological analysis of the operative piece.

Patient and observation

A 32-year-old nonsmoking male presented with terminal macroscopic hematuria and burning micturition since 3 weeks, with no previous medical history. Pelvic ultrasound revealed an asymmetrical thickening of the right anterolateral bladder wall. Urine cytology did not suggest a malignancy. The patient underwent cystoscopy, which showed the thickening of bladder wall, with blood clots. A CT urography was realized afterwards and confirmed the presence of a thickening of the right anterolateral bladder wall (figure 1), covering the ureteral meatus with moderate dilatation of upstream urinary tract (figure 2). No lymphadenopathy or distant metastasis have been demonstrated. Partial cystectomy was performed, and histopathological examination of the operative piece revealed the presence of spindle-shaped cells accompanied by inflammatory infiltrates (figure 3). The final diagnosis was inflammatory myofibroblastic tumor (IMT). The evolution was favorable.

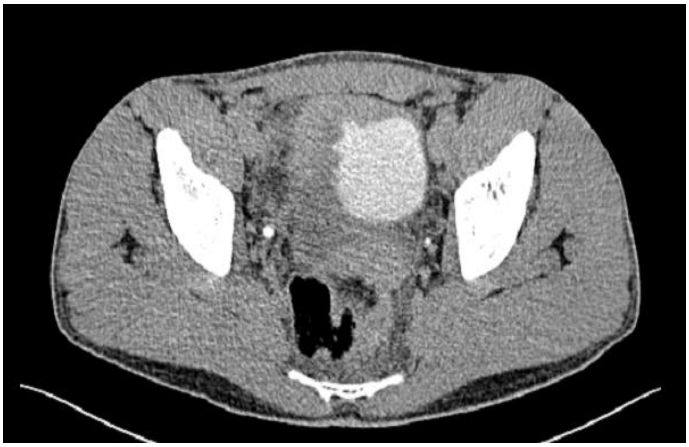

Figure 1. CT urograhy showing an asymmetrical thickening of the right anterolateral bladder wall, with contrast enhancement.

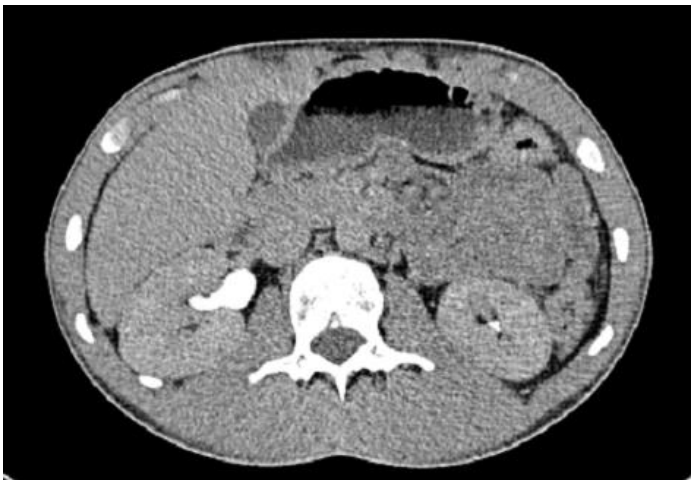

Figure 2. CT urograhy showing the moderate dilatation of upstream right urinary tract.

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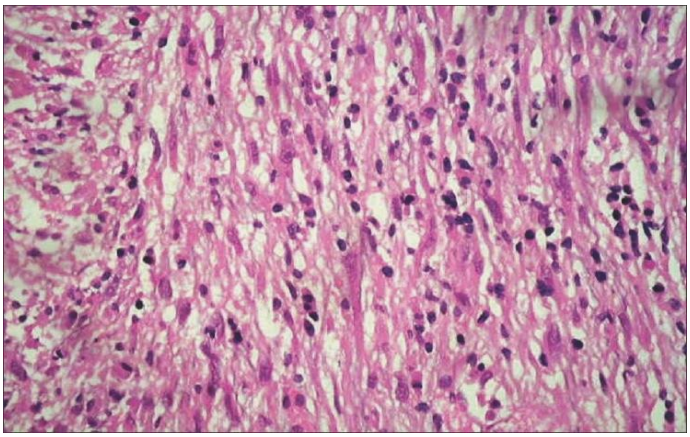

Figure 3. Spindle cell proliferation arranged in a myxoid substance (H and E, ×400).

Discussion

Inflammatory myofibroblastic tumor is an enigmatic and uncommon spindle cell lesion that can occur in the mesentery, omentum, retroperitoneum, pelvis, and abdominal soft tissues in 73% of cases. However, the occurrence of an IMT in the urinary bladder is unusual [1]. It has gone by different names over the years: inflammatory pseudotumor, pseudo-sarcomatous fibromyxoid tumor, and nodular fasciitis [2]. The first case was reported by Roth in 1980 [3]. A systematic review by Teohetal evaluated 182 IMT cases found a mean age of patients of 38.9 years with female predominance [4].

The origin of IMT is controversial, current hypotheses based on previous reports include infection, trauma, or surgery, but a recent report suggests that it is neoplastic because of its aggressive behavior, involvement of chromosome 2p23 and cytogenetic clonality [5].

The most common clinical finding at presentation is hematuria. Other less common clinical presentations include infection, abdominal/pelvic pain, and obstructive symptoms. Rarely, patients are seen with systemic symptoms such as fever and weight loss, which have been attributed to cytokine production [6].

Clinically and radiologically, IMT of the urinary bladder is indistinguishable from other entities, it has a broad differential diagnosis ranging from reactive to neoplastic malignant lesions, comprising postoperative spindle cell nodule, embryonal rhabdomyosarcoma, leiomyosarcoma or sarcomatoid urothéliale carcinoma. IMT occur commonly in the superior wall or the front wall of the bladder [7]. Ultrasound findings are unspecific, and on CT, IMT can present as intraluminal polypoid or submucosal mass, with variable density and, usually, early peripheral enhancement. Perivesical fat stranding can also be present [4]. This imaging features of this tumor are unspecific, and diagnostic distinction from malignant neoplasms can be problematic. Consequently, the final diagnosis often depends on histopathological features and the immunohistochemical profile. Under microscopic examination, IMT characteristically displays myofibroblastic spindle cells with inflammatory components [8].

Treatment of this tumor should be conservative. If the tumor infiltrates only the superficial part of the vesical wall, a deep and complete resection is sufficient, with an endoscopic control 6 weeks later, to look for a residual tumor. Otherwise, partial cystectomy is sometimes necessary. It allows to completely excise the tumor and to obtain an operative piece with a complete histological analysis of the bladder wal [9].

Despite the rarity of recurrence, IMTs merit close follow-up due to their unknown malignant potential and the difficulty in excluding the diagnosis of sarcomatoid carcinoma.

Conclusion

IMT is a rare tumor of the urinary bladder which can be very difficult to distinguish from some malignant bladder tumors. The imaging features are unspecific and biopsy is the gold standard for diagnosis. Surgical resection is the treatment of choice, and should be conservative.

References

[1] T. Etani, T. Naiki, T. Nagai, K. Iidab, R. Andob, A. Naiki-Itoc, N. Kawai, K. Tozawab, K. Mizunob, A. Okadab, T. Mogami, T. Yasui, “Inflammatory Myofibroblastic Tumor of the Urinary Bladder: A Case Report” Case Rep Oncol 9:464–469; 2016.

[2] M. Alderman, MD; LP. Kunju, MD, “Inflammatory Myofibroblastic Tumor of the Bladder”, Arch Pathol Lab Med, Vol.138, October2014

[3] R N. Rao, P. Ranjan, N. Singla, R. Pandey, “Infammatory myofbroblastic tumor of the urinary bladder diagnosed by anaplastic lymphoma kinase immunostaining”, Urology Annals, Vol. 4, Issue 2, May - Aug 2012

[4] SS. Lopes, A. Furtado, R. Oliveira, A. Cebola, B. Graça, MF Coelho, F. Ferrito and C. Gomes, “Inflammatory Myofibroblastic Tumor of the Bladder: 2 Rare Cases Managed with Laparoscopic Partial Cystectomy”, Case Reports in Urology, Article ID 4976150, 3 pages, 2016

[5] V. Yagnik, A. Chadha, S. Chaudhari and K. Patel, “Inflammatory myofibroblastic tumor of the urinary bladder”, Urol Ann. 2(2): 78–79, May-Aug 2010**.**

[6] M. Dakir, A.Taha, H. Attar, I. Sarf, R. Aboutaib, A. Moussaoui, F. Meziane, “Les tumeurs myofibroblastiques inflammatoires de la vessie”, Prog Urol, 14, 1213-121, 2004.

[7] D. Song, MM, W. Jiao, Z. Gao, N. Liu, S. Zhang, Y. Zong,
Z. Fang,Y. Fan, “Inflammatory myofibroblastic tumor of urinary bladder with severe hematuria: A Case report and literature review”, Medicine 98:1(e13987), 2019.

[8] R. Alam, MH. Johnson, T. Caldwell, CP. Pavlovich, TJ. Bivalacqua, and JJ. Tosoianand, “Treating Inflammatory Myofibroblastic Tumor of the Bladder”, Case Reports in Urology, Article ID 5724020, volume 2016.

[9] A. Benchekroun, H.A. ElAlj, H. Essayegh, M. Zannoud, L. Benslimane, M. Marzouk, F. Mahassini, M. Faik, “Inflammatory pseudotumor of the bladder: a new case report”, Annales d’urologie 37, 105–107, 2003.