A rare inflammatory myofibroblastic bladder tumor masquerading urachal carcinoma

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INTRODUCTION

Nonepithelial tumors account for 2%–5% of all primary urinary bladder neoplasms, with the most common types being rhabdomyosarcoma. Inflammatory myofibroblastic tumor (IMT) is a rare spindle tumor often mistaken for a sarcoma, particularly when it occurs in the bladder. Since a bladder sarcoma warrants radical cystectomy and IMT of the bladder is generally managed more conservatively, distinguishing between the two tumors is of critical importance. IMT has been described in numerous body sites and tumors with similar morphology have been assigned many names, including plasma cell pseudotumor, inflammatory pseudotumor, xanthomatous pseudotumor, pseudosarcomatous myofibroblastic proliferation, inflammatory myofibrohistiocytic proliferation, atypical fibromyxoid tumor, and atypical myofibroblastic tumor. Herein, we report on an extremely rare case of an IMT of the urinary bladder.

CASE REPORT

A 19-year-old female presented with gross hematuria and storage symptoms to the emergency department. She denied night sweats or fever and any history of urinary tract infection, trauma, instrumentation, or other urological problems. An ultrasound study of the kidneys and urinary bladder revealed a broad-based mass located in the dome and anterior wall of the bladder. Urachal carcinoma was kept as a possibility and transurethral biopsy of the aforementioned lesion was performed. The histopathology revealed inflammatory myofibroblastic tumor (IMT) of the bladder. A laparoscopic partial cystectomy was undertaken with adequate resection margins and the histopathology of the lesion confirmed IMT. When evaluating a mass in the genitourinary tract in a young individual, IMT should be considered as a possibility.

Keywords: Inflammatory pseudotumor, laparoscopic partial cystectomy, urachal carcinoma, urinary bladder
and anterior wall of the bladder [Figure 1]. Clinically, a diagnosis of urachal carcinoma was thought of due to the location of the mass. The patient underwent cystoscopy which confirmed the lesion arising from the dome and anterior wall [Figure 2]. Transurethral biopsy of the aforementioned lesion was performed with hemostatic measures. Hematuria subsided after this exercise. To our surprise, the histopathology of the biopsy revealed it to be IMT of the bladder. With this, the patient was taken up for laparoscopic partial cystectomy. Cystoscopy was done initially and the resection margins were marked with Collins knife. Subsequently, three 12-mm ports were placed at and either side of the umbilicus. Tumor was involving full thickness of urinary bladder and tumor nodule was seen on serosal surface suggesting transmural nature of lesion. A partial cystectomy was performed with adequate resection margins [Figure 2]. The bladder was subsequently closed using absorbable sutures. The patient did well in the postoperative period and was discharged on the 3rd postoperative day. Histopathology confirmed IMT and the patient is doing well in the follow-up [Figures 3 and 4].

**DISCUSSION**

Nonepithelial tumors account for 2%–5% of all primary urinary bladder neoplasms, with the most common types being rhabdomyosarcoma. IMT is a rare spindle tumor often mistaken for a sarcoma, particularly when it occurs in the bladder. Since a bladder sarcoma warrants radical cystectomy and IMT of the bladder is generally managed more conservatively, distinguishing between the two tumors at this and other sites is of critical importance.

IMT of the bladder is an uncommon benign tumor of bladder of unknown neoplastic potential characterized by spindle cell proliferation with characteristic fibroinflammatory and pseudosarcomatous appearance. It is also known as plasma cell pseudotumor, inflammatory pseudotumor, xanthomatous pseudotumor, pseudosarcomatous myofibroblastic proliferation,
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