Case Report

Infected inguinal hernia mesh presenting as pseudotumor of the bladder

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ABSTRACT

Pseudotumors are uncommon benign tumors considered as a reactive inflammatory lesion. We report a case of a 53-year-old male with a history of right laparoscopic hernia repair and now referred for suspected urachal cyst. Imaging investigations revealed an abdominal mass arising from the wall of the urinary bladder. During dissection, we found a tumor arising from the urinary bladder infiltrating the posterior wall of rectus muscles and further dissection revealed presence of the previously placed inguinal mesh. Postoperative histopathological examination revealed inflammatory pseudotumor. With only one comparable case described, an infected mesh presenting as pseudotumor of the bladder is extremely rare.

Key words: Infected mesh, laparoscopic hernia repair, pseudotumor

INTRODUCTION

Laparoscopic hernia repair with a mesh is a standard of care for symptomatic inguinal hernias. They are a common surgical procedure with low morbidity and mortality, but infection of the mesh is a feared complication. Pseudotumors, also known as inflammatory myofibroblastic tumors, are uncommon benign tumors of unknown etiology and mimic neoplastic tumors. It is considered a reactive inflammatory lesion with good prognosis but with potential of recurrence and persistent local growth.[1] We describe a case of an infected inguinal hernia mesh presenting as an inflammatory pseudotumor.

CASE REPORT

A 53-year-old male presented to the surgical department with lower abdominal pain. An ultrasound revealed a well-defined 5.6 × 4.6 cm isoechoic lesion superior to the urinary bladder and connecting with the umbilicus via a duct, suggesting an urachal remnant lesion or an infected urachal cyst. Subsequently, he was referred to our urology department for further management.

He was diabetic and had undergone a laparoscopic inguinal hernia mesh repair 2 years previously. Physical examination revealed some abdominal tenderness. Urine sediment and culture showed no abnormalities, laboratory findings were normal and abdominal computed tomography (CT) scan confirmed a urachal cyst [Figure 1]. Preoperative cystoscopy showed normal bladder mucosa. The patient deferred intervention for 9 months for personal reasons. On laparotomy, a 10-12 cm fibrous nodular mass was seen arising from the dome of the urinary bladder, fixed to the right posterior surface of the rectus muscles. Because the procedure was performed late at night, no pathologist was available so frozen section could not be done. Because of its malignant appearance, we considered the risk of invasion and metastasis very likely, what resulted in discontinuation of the procedure. Incisional biopsy was taken and procedure was deferred until histopathological examination was done. Because the preoperative CT scan had become dated, we repeated an abdominal CT scan postoperative, which showed a lesion with heterogeneous solid components and thickening of anterior bladder wall [Figure 1]. Histopathological examination revealed fibroinflammatory tissue.

Ruled out malignant disease, 6 days after the initial procedure relaparotomy with frozen section was planned.

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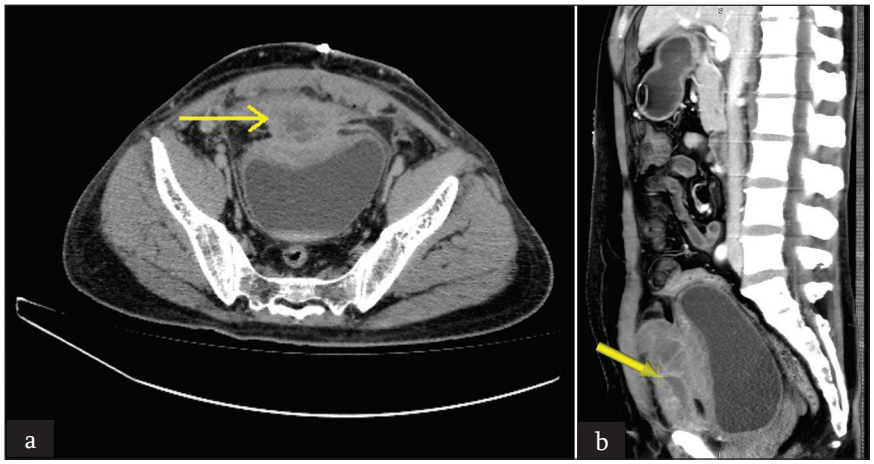

Figure 1: Abdominal CT scan showing (a): axial, (b): saggital, a lesion with heterogeneous solid components and thickening of anterior bladder wall (arrow)

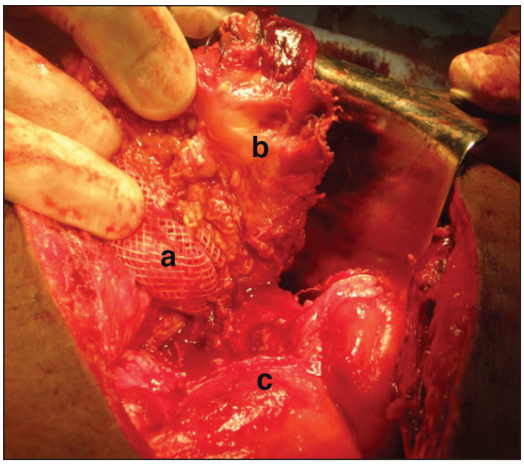

Figure 2: (a) Cranial view of mesh (b) surrounded with pseudotumor, (c) just before surgical removal from bladder wall

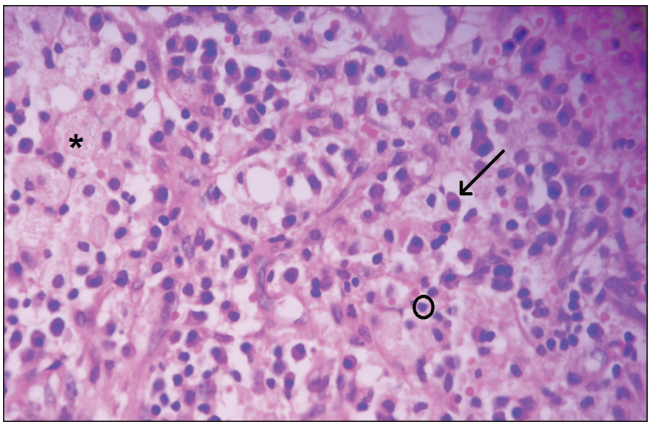

Figure 3: Histopathology (hematoxylin-eosin stain, 40× magnification) from biopsy specimen of pseudotumor demonstrates sheets of foamy histiocytes (*), plasma cells (arrow), and lymphocytes (circle)

During dissection, the tumor was identified infiltrating the posterior wall of the right rectus sheath. Frozen section was done to exclude a sampling error and to rule out an inadequate first sample. Further dissection revealed presence of the previously placed inguinal mesh [Figure 2]. Excision of ventral part of the bladder wall, total fibrous tissue, and mesh was performed and frozen section was suggestive of inflammatory pseudotumor. Histopathological examination confirmed the frozen section, without any signs of malignancy [Figure 3]. The postoperative period was uncomplicated and patient was discharged asymptomatically after 3 days.

DISCUSSION

Development of pseudotumor involving the urinary bladder after inguinal hernia repair is a very uncommon complication. As far as we know, only one comparable case has been described in literature.[2] Inflammatory pseudotumor is a spindle cell proliferation of disputed nosology, with a distinctive fibroinflammatory and even pseudosarcomatous appearance. Although the lung is the best known and most common site, inflammatory myofibroblastic tumor occurs in diverse extrapulmonary locations. It is a benign, nonmetastasizing proliferation of myofibroblasts with a potential for recurrence and persistent local growth, similar in some respects to the fibromatoses.[1]

Mesh-related infections following surgery occur relatively infrequent compared with other device-related infections. The reported incidence of mesh-related infection following hernia repair has been 1%-8% in different series.[3] The rate of infection is influenced by underlying comorbidities and seems to be increased in patients with diabetes, immunosuppression or obesity. Also, the type of mesh, surgical technique, and the strategy used to prevent infections plays an important role. The reported median interval between hernia repair and infectious presentation is 4 months, ranging from 2 weeks to 39 months.[4] Patients usually present with a combination of pain, erythema, tenderness, swelling, and increased

temperature in the abdominal wall in the area of the mesh. Sometimes, a mesh-related infection can manifest with an intraabdominal abscess. In literature, urachal cysts are not associated with infected mesh. To notice in our case, an urachal cyst was suspected based on abdominal ultrasound and, therefore, referred to us. Abdominal CT scan provided additional information but still was not sufficient enough for ultimate diagnosis.

When a mesh-related infection occurs, total surgical removal of the mesh is the preferred management strategy. Removal of late-onset infected mesh results in resolution of symptoms in the majority of cases, whereas recurrence of hernia is not common.[5]

We described a case of an infected inguinal mesh presenting as pseudotumor of the urinary bladder. Although this is a rare complication of hernia repair, it is important to be aware of a history of inguinal or other abdominal surgery in patients with (atypical) abdominal manifestations.

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