Foreign Body Granuloma Masquerading as Bladder Tumor: A Rare Case Report

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Foreign body granuloma can occur after any surgical procedure, where non absorbable sutures have been used. It may occur due to forgotten other non-absorbable like gauze. Though foreign body granuloma has been reported involving many organs, but it is very rare to involve urinary bladder wall and to present it as urinary bladder tumor. We present such a unique case where use of Barbour thread for tubal ligation led to a large foreign body granuloma infiltrating bladder wall and presenting as bladder mass. Even contrast enhanced computed tomography showed a mass, which appeared to arise from the anterior aspect of the bladder suggestive of urachal carcinoma. Only on histopathological examination diagnosis was confirmed to be foreign body granuloma.

Keywords: Bladder tumor, Foreignbody, Granuloma

INTRODUCTION

Various foreign bodies, which introduced into the human body during surgery or any trauma may cause a granulomatous reaction. Although rare, foreign body granuloma may cause some diagnostic problems, especially when they present with imaging findings like tumors.

Foreign body granuloma may present at various sites as different presentation. Foreign body materials that can induce a foreign body reaction include non-absorbable suture materials, surgical sponges, Teflon and activated charcoal. These lesions are of clinical importance because they create imaging findings that may be confused with a malignant lesion, which can lead to unnecessary surgical treatment. Presenting as bladder mass is a very rare condition, and it needs a high level of suspicion for the diagnosis. A very few cases have been reported previously. We present such a rare case of foreign body granuloma, which presented as a urinary bladder mass.

CASE REPORT

A 27-year-old female presented to our OPD with complain of dysuria and frequency for 6 months. Six months back she underwent tubectomy. On examination, three centimeters vertical infra umbilical scar was present. A lump was felt in the suprapubic region on bimanual palpation. Her routine investigations were normal. Contrast enhanced computed tomography (CT) scan abdomen revealed a 4 cm × 5 cm solid mass arising from anterior wall of bladder infiltrating into the anterior abdominal wall, which enhanced on contrast injection (Figure 1).

Cystoscopy revealed 3 cm × 4 cm solid mass arising from anterior bladder wall, mucosa over mass shows neovascularization. A transurethral biopsy was taken, histology report shows features of chronic inflammation with lymphocytic infiltration. Patient was counseled and considered for partial cystectomy. A vertical midline infrumbilical incision was given, abdomen was opened and prevesical space was entered. There was a hard mass arising from the right side of anterior bladder wall. There were dense adhesions between mass and rectus muscle; omentum was stuck to the tumor. Distal segment of the fallopian tube along with right small ovarian cyst was adhered to one side of the tumor. A healthy bladder area was dissected around the tumor, partial excision was done (Figure 2). The surrounding bladder wall was thickened and inflamed. Bladder was closed in two layers with suprapubic...
catheter and retro pubic drain. On bisecting tumor, there was a small cavity in the center of the tumor that contained pus and Barbour thread. Histopathology report was foreign body granuloma (Figure 3).

**DISCUSSION**

Foreign body like non-absorbable sutures sometimes lead to chronic sinus and fistula formation. Foreign body granuloma infiltrating into the bladder wall and presenting as a tumor is rare. Kyriakou et al. presented a similar case of large extravesical foreign body granuloma due to cotton gauze that infiltrated bladder wall and presented as a bladder tumour.4

Wyman and Kinder reported a case of squamous cell carcinoma of the bladder caused by shrapnel injury that caused prolonged intra-pelvic sepsis and sinus formation.5 Silk suture used in herniorrhaphy may present as large pelvic granuloma and simulate as bladder mass.6 Carroll et al., has reported paravesical suture granuloma resembling bladder carcinoma on CT scan.7 Dogra et al., has also reported foreign body granuloma mimicking as renal neoplasm.8 In our case also there was diagnostic dilemma as contrast enhanced tomography was suggestive of urinary bladder tumor arising from the anterior wall. In the present case, a Barbour thread used for tubal ligation led to the foreign body granuloma formation that infiltrated the bladder wall. It is advisable to use absorbable suture instead of Barbour thread in tubectomy.9

**CONCLUSION**

These lesions are of clinical importance because they create imaging findings that may be confused with a neoplasm. It is advisable to use absorbable suture instead of Barbour thread in tubectomy. A high level of suspicion is needed to diagnose these types of cases.

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