Mucinous cystadenoma of the dome of urinary bladder: A rare case report

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Abstract
Mucinous cystadenoma of the urinary bladder is a very rare tumor and only a handful of cases have been described in the literature. It can easily be missed on cystoscopic examination as the lesion is not intramucosal. In addition, extensive workup is required to rule out borderline or frank malignant neoplasm elsewhere in the body. Due to its scarcity and diagnostic challenges, we report a mucinous benign cystic lesion arising in the dome of the urinary bladder.

Key Words: Benign cystic lesion, dome of urinary bladder, mucinous cystadenoma, urachus, urinary bladder

INTRODUCTION

Mucinous cystadenoma of the urinary bladder is a rare tumor with very few cases described in the literature. The tumor is extramucosal and stays out of the urinary bladder cavity, presenting as a lump in the abdomen. The extensive workup is required to rule out borderline or frank malignant neoplasm elsewhere in the body. We report a mucinous benign cystic lesion arising in the dome of the urinary bladder, as a very rare condition.

CASE REPORT

A 60-year-old female presented to us on August 13, 2013 at Lata Mangeshkar Hospital and NKP Salve Institute of Research Sciences with chief complaints of lump in lower abdomen since 12 months and pain in abdomen since last 3 weeks. Lump was incidentally noticed and gradually increasing in size. The pain was constant and dull in nature with no radiation. She had no history of fever, vomiting. She had no bowel or bladder complaints. Patient had her menarche attained around 10 years back. She had regular periods.

On per abdominal examination a large lump involving whole of the abdomen palpable. The overlying skin was shiny and stretched. The lump was nonmobile, nonpulsatile, and firm in consistency [Figure 1].

Ultrasoundography abdomen study showed a large well-defined heterogeneous lesion appearing to arise from pelvis suggestive of the possibility of a pelvic mass likely ovarian in origin.

Contrast-enhanced computed tomography abdomen revealed a rim enhancing, well defined lobulated large intraperitoneal hypo dense cystic lesion of size 21 cm × 19 cm × 17 cm in dimension with volume of approximately 4 L, arising in the pelvis, with few thick walled septa within the lesion, with multiple calcific foci suggestive of benign etiology. Both ovaries seen separately [Figure 1]. A possibility of primary intraperitoneal cystic lesion like hydatid cyst was considered. Her laboratory investigations were normal.

The patient was operated on August 29, 2013 for exploratory laparotomy with excision of the cyst. A midline incision was given. Abdomen opened. A huge cystic swelling, completely extraperitoneal from the anterior wall of the dome of the urinary
bladder and extending superiorly up to xiphisternum [Figure 2]. The cyst was extending behind the pubic symphysis and was adherent to the pubic bone posteriorly. Aspiration tried with wide bore needle but failed. Cyst opened. Thick mucinous fluid could not be sucked due to repeated blockage [Figure 2]. Some amount of fluid was drained [Figure 2] and the cyst was closed. Cyst separated from anterior bladder wall by blunt dissection. During a separation from the bladder wall, bladder opened at the dome. Closure of bladder wall was done in two layers. Cyst excision was done. Uterus, ovaries, and ureter were normal. Drain placed in retroperitoneal space. Closure was done.

Histopathology was suggestive of the benign cystic lesion with calcification [Figure 3]. Patient recovered well and discharged after 2 weeks [Figure 4].

**DISCUSSION**

The most common sites of origin of mucinous cystadenoma are ovary, pancreas and appendix[1-3], most other adenomas, such as villous[4] and nephrogenic[5] arise from the urothelial lining commonly with features of cystitis and are easily accessible to cystoscopic biopsy. Only 2–3 cases of mucinous cystadenoma of the urinary bladder have been described in the literature.[6,7] The first case of mucinous cystadenoma of the urinary bladder was described by Govan[6] in a male patient of 57 years, who had hematuria with a mass in the hypogastrium. At laparotomy, it was found to be attached to the fundus of the bladder under the peritoneum. Histologically, the appearance suggested an origin in a heterotopic focus of mucus-secreting epithelium of prostatic origin which has undergone repeated attacks of inflammation with resultant cystadenoma in the process of healing.

The second case was published by Steele and Byrne[7] under the heading of the paramesonephric (muellerian) sinus of the urinary bladder. The patient, a woman, aged 19 years presented with dysuria. A firm, tender palpable mass to the right of the uterus was found, which was 2 cm in diameter cystoscopically and protruded into the bladder. The lesion involved the urinary tract.
bladder and broad ligament. Histologic appearances were similar to the previous case. The suggested point of origin was the embryologic urogenital ductal system. Since basement membrane and smooth muscle were absent, the possibility of paramesonephric ductal origin was considered. Conditions such as endometriosis, cystitis glandularis, nephrogenic adenoma, urachal remnant and extra ovarian mucinous cystadenoma were excluded.

A third case published by Soomro and Rashid[8] in 1997 in a male patient which was confined to the dome of the urinary bladder bears a close resemblance to the first case reported.

Our case reported in a 60-year-old female with resemblance to these reports in many respects, most importantly, as it originated from the dome of the urinary bladder and very similar pathologic features suggestive of benign cystic lesion with calcification. These four cases should be considered as part of the same morphologic spectrum. Since the number of cases reported is very small, it is difficult to predict progression to malignancy, especially mucinous cyst adenocarcinoma. Similarly, pseudomyxoma peritonei, a serious complication of mucinous neoplasms, is a possibility, although no reported case exists to prove it. From the pathologic point of view, once a mucinous lesion of the urinary bladder is seen, it is important to exclude the presence of malignant or borderline change. The evidenced of more than three cell layers thick stratification, the possibility of malignant change should be considered.[8] Extensive sampling with multiple levels and blocks should be carried out. Similarly, capsular invasion is another factor, which would indicate carcinomatous transformation.

This case is described as a rare case of mucinous tumor of uncertain malignant potential most probably arising from the dome of the urinary bladder.

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