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Case Report

An Extremely Rare Case of Ovarian Cyst Infiltrated the Urinary Bladder Manifesting as Urinary Bladder Neoplasm

Miah M Z I[1], Haque N U[2], Khalilullah M I[3]

Abstract

This is a case report of Ovarian dermoid cyst perforating into the urinary bladder presenting with irritative lower urinary tract symptoms characterized by burning micturtion with total haematuria for the last two months. Ovarian dermoid cyst is perforating into urinary bladder pose a diagnostic dilemma for urologist, gynecologist, radiologist and for histopathologist.

Introduction

Ovarian dermoid cysts are common lesions accounting for up to 40% of all ovarian neoplasms. Most of the cases are asymptomatic. Symptoms develop once complications set in. Invasion into adjacent viscera such as the rectum, the small bowel, the peritoneum, and the urinary bladder is extremely rare.[1] The first case of urinary bladder teratoma was reported by Marsden *et al*. in 1981 who studied the dataset of 137 children (age 0–14 years) from the Manchester University Children's Tumour Registry (MCTR).[2]

The first case of urinary bladder teratoma from Asia was described by Misra *et al*. in 1997 in a young Indian girl with a partially mobile mass on per rectal examination. The mass had tufts of hair on cystoscopic examination; a provisional diagnosis of bladder teratoma was corroborated by histopathological examination and the mass was resected surgically.[3]

Agrawal *et al*. described another of urinary bladder teratoma from Asia case in a 29-year-old female with a yellowish-to-grayish white bladder mass on cystoscopy with multiple hair on its surface. Transurethral resection of the mass was done, and a diagnosis of mature teratoma of urinary bladder was confirmed.[4]Okeke *et al*. also reported a dermoid cyst of urinary bladder in 2007 in a 34-year-old female with multiple tiny echogenic structures causing acoustic shadows in the urinary bladder.[5] Tandon et al. reported a case of mature ovarian dermoid cyst invading the urinary bladder in 2010 where patient was presented with pus like discharge per urethra with occasional episodes of hematuria for 6 months.[6]

To our knowledge, the last case of dermoid cyst of urinary bladder was reported by Jain et al. in 2017A 30-year-old female presented with the complaints of left flank pain and dysuria. Cystoscopy and transurethral resection biopsy revealed a hard bladder mass having hair and calcifications on the surface and yellowish fat in the center involving the bladder dome on the right side.[7]

Because only a few cases have been reported in the literature in the past, we report a case of ovarian dermoid cyst perforating into the urinary bladder presenting with irritative lower urinary tract symptoms characterized by burning micturtion with total hematuria for the last 2 months.

Case Report

Mrs Razia, 50 yrs of age, female, housewife, Muslim, non-diabetic, non-hypertensive, non-asthmatic hailing from Bowalmari-Faridpur got admitted into this hospital with the complaint of total haematuria (passage of blood with urine the whole time of micturition) with occasional passage of clotted blood with urine for 2 months and burning sensation during micturition for 2 months which was relieved by taking analgesics but was not associated with fever, chills, rigors, nausea and vomiting or weight loss. She had no allergic history and her bowel habit was normal.

On general examination she appeared to be ill looking, emaciated, moderately anaemic, her body build was below average, pulse-75 b/min, BP- 110/70 mmHg, Temp- 98^{0}F, RR-14 Breath/Min. Systemic examination only revealed mild lower abdominal tenderness. No organomegaly was found and all the other systems findings were normal. So, we suspected this case as UB neoplasm and investigated accordingly.

Laboratory Investigations

1. CBC
   a. HB%: 10.9 gm/dl
   b. ESR: 82 mm in 1st hr
2. Random Blood Sugar: 4.75 mmol/l

1. Professor Dr. Md. Zohirul Islam Miah
   Professor & Head, Department of Urology
   Diabetic Association Medical College, Faridpur.
2. Dr. Nahid-Ul-Haque
   Assistant Professor, Department of Endocrinology
   Diabetic Association Medical College, Faridpur.
3. Dr. Md. Ibrahim Khalilullah
   Assistant Professor, Department of Anatomy
   Diabetic Association Medical College, Faridpur.

Correspondence to:
Professor Dr. Md. Zohirul Islam Miah
Professor & Head, Department of Urology
Diabetic Association Medical College Faridpur, Bangladesh.
Email: dr.zohirul@yahoo.com

3. Serum Creatinine: 0.85 mg/dl (20/07/16)
4. Blood Group: `B` Positive
5. Urine R/M/E

a. Pus cell- plenty

b. RBC- plenty

6. ECG : Old MI (inferior)
7. Chest X-ray : Mild cardiomegaly
8. USG of whole abdomen:
   - 12/07/16: suggestive of fibroid uterus with tumor in UB
   - 15/07/16: Mild fatty change in liver, prolapsed uterus, constipated bowel, cystitis.
   - 20/07/16: severe UTI.
   - 01/09/16: Single UB mass with multiple calcification.

Operation Note

Cystoscopic findings: Urethra and bladder neck was found normal. Ureteral orifices were found normal in position and size. There was a hole at the fundus of UB through which a tuft of hair emerged looked like grasses interlacing with each other. Hairs were pulled with biopsy forceps but could not remove completely.

So, we went for open operation through suprapubic retroperitoneal approach. After exploration, UB was found adherent to the left Ovary. Then ovary was separated from the bladder and found a DERMOID CYST originated from the ovary and content of the cyst burst into urinary bladder. Then left sided oophorectomy (including cyst) was done and bladder wound was closed in layered. Histopathological findings were consistent with dermoid cyst of ovary.

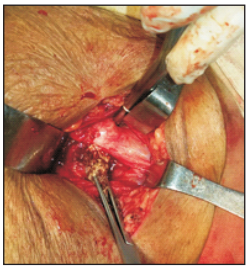

Fig 1. Suprapubic retro-peritoneal approach and cyst is visible.

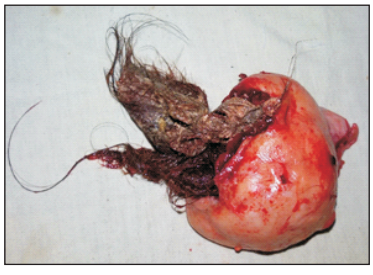

Fig 2. Excised bladder along with Lt. ovary with dermoid cyst.

Discussion

Dermoid cysts can be found at various sites, most common being the ovaries. However, the occurrence of dermoid cysts in the urinary bladder is an extremely rare entity.Dermoid cyst (Teratomas)can present differently but the common factor is the presence of a solitary, or occasionally multiple, hamartomatous tumor. The tumor is covered by a thick dermislike wall that contains multiple sebaceous glands and almost all skin adnexa. Hairs and large amounts of fatty masses cover poorly to fully differentiated structures derived from the ectoderm. Depending on the location of the lesion, dermoid cysts may contain substances such as nails and dental, cartilagelike, and bonelike structures.[8] In a study conducted by Chanu SM et al. reported mature cystic teratoma was most common (20.8%) histopathological diagnosis among 101 cases of ovarian tumor.[9] Uncomplicated ovarian dermoid cysts are usually asymptomatic, and symptoms mostly appear after secondary complications develop. When ovarian cysts are large, they may cause abdominal discomfort. If pressing on the bladder it may also cause frequency of urination. The signs and symptoms of ovarian cysts may include; pelvicpain, dysmenorrhea, and dyspareunia. Other symptoms are nausea, vomiting, or breast tenderness, fullness and heaviness in the abdomen and frequency and difficulty emptying of the bladder.[10] Reported complications include torsion (16%), rupture (1–4%), malignant transformation (1–2%), infection (1%), invasion into adjacent viscera and autoimmune hemolytic anemia ($p<1\%$).[11]In most of the series of dermoids perforating into the bladder, the diagnosis was established via cystoscopy and laparotomy[12].

Conclusion

Ovarian cysts are commonly encountered in gynecological practice but involvement of UB is extremely rare condition. The definitive treatment is excision of the dermoid cyst along with partial cystectomy. Histopathological examination is essential to exclude malignant transformation. A high index of suspicion along with of the help of imaging modalities are needed to arrive at the correct preoperative diagnosis.

References

1. Sanjay Kumar Gupta et al. Ovarian Dermoid Cyst Perforating Into the Urinary Bladder UroToday Int J. 2012 August;5(4): art 31.
2. Marsden H, Birch J, Swindell R. Germ cell tumours of childhood: A review of 137 cases. J Clin Pathol. 1981;34:879–83.
3. Misra S, Agarwal PK, Tandon RK, Wakhlu AK, Misra NC. Bladder teratoma: A case report and review of literature. Indian J Cancer. 1997;34:20–1
4. Agrawal S, Khurana N, Mandhani A, Agrawal V, Jain M. Primary Bladder Dermoid. Urol Int. 2006;77:279–80.
5. Okeke L, Ogun G, Etukakpan B, Iyama A, Adeoye A, Duduyemi B. Dermoid cyst of the urinary bladder as a differential diagnosis of bladder calculus: A case report. J Med Case Rep. 2007:1
6. Tandon A, Gulleria K, Gupta S, Goel S, Bhargava SK, Vaid NB. Ultrasound Obstet Gynecol. 2010 Jun; 35(6):751-3

7. Jain C, Mittal MK, Shiraz F. An extremely rare case of dermoid cyst of urinary bladder. The Indian Journal of Radiology & Imaging. 2017;27(3):302-305. doi:10.4103/ijri.IJRI_287_16.

8. Dermoid Cyst: Background, Pathophysiology, Epidemiology [Internet]. Emedicine.medscape.com. 2018. [Updated: Mar 13, 2018]. Available from: https://emedicine.medscape.com/article/1112963-overview.

9. Chanu SM, Dey B, Raphael V, Panda S, Khonglah Y. Clinico-pathological profile of ovarian cysts in a tertiary care hospital. Int J Reprod Contracept ObstetGynecol. 2017;6(10):4642-5.

10. Farghaly SA. Current diagnosis and management of ovarian cysts. Clin Exp ObstetGynecol. 2014;41:609-12.

11. Park SB, Kim JK, Kim KR, Cho KS. Imaging findings of complications and unusual manifestations of ovarian teratomas. Radiographics 2008; 28: 969–983.

12. Hedge, P., Natarajan, K., Thomas, J., et al. (2002). "Ovarian dermoids perforating into the urinary bladder." Indian J Urol 18:183-184.