



INTRAVESICAL DERMOID MIMICKING FOETUS INSIDE URINARY BLADDER-A CASE REPORT

Surgery

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ABSTRACT

Dermoid cysts are benign developmental lesions arising from totipotent germ cells which can give rise to different orders of cell necessary to form mature tissues like hair, bone, teeth etc. Ovarian dermoid cyst can occur at any age but majority are detected in child bearing age group. Urinary bladder is a very uncommon site of dermoid cyst. We report a case of 28 yr old married woman who presented with lower abdominal pain and dysuria. Routine blood investigations and urine biochemistry was within normal limits. Screening USG and MRI pelvis suggested a 5.6 x 3.2 x 4.5 cm size dead macerated fetus in urinary bladder with a 7.1mm size defect in adjacent right lateral wall of urinary bladder and a presumptive diagnosis of an intravesical product of conception arising from right adnexal ectopic pregnancy transmigrated through the adjacent bladder wall defect was made. However on cystoscopy a similar sized mass was seen attached to the right lateral wall of the bladder with hair follicles projecting out from the surface. Diagnostic lap and dye revealed patent tube on right side which was ligated subsequently. The patient was managed by suprapubic cystotomy and removal of the mass along with closure of the bladder wall defect. Surprisingly HPE revealed dermoid cyst with no evidence of trophoblast/foetal cells. Post operative course was uneventful.

KEYWORDS

Dermoid, Cystoscopy, Trophoblast, Ectopic Pregnancy, Cystotomy

BACKGROUND

Dermoid cyst is a benign cystic teratoma of germ cell origin¹. They contribute 5-10% of all cystic tumours of the ovary. Contrary to the name 'dermoid' they contain tissues from mesodermal and endodermal lineage in addition to ectoderm. Ovaries are the most common site of dermoid cyst. Extra ovarian dermoid cyst arises occasionally in lumbar region, uterovesical area, Parasacral region and recto vaginal septum. Urinary bladder is a very rare location of dermoid cyst². Our case is a 28 yr old female who presented with features of lower urinary tract symptoms. The extraordinary feature of the patient was that on radiological investigations she was diagnosed to have macerated foetus transmigrated to bladder through a defect in the adjacent wall. However, cystourethroscopy examination shown the features of dermoid cyst, which after excision also came out to be dermoid on HPE.

Case Presentation

A 28 year old married woman presented with complaints of lower abdominal pain and dysuria with a history of single episode of hematuria. She was married in 2013 and mother of two children, the youngest one was born in 2015, both children were born through normal vaginal delivery. She has undergone bilateral tubal ligation in a district hospital in 2016, since then she started having the above mentioned complaints. Her menstrual history is normal with no history of amenorrhea. There was no history of fever, weight loss. Her general physical examination was unremarkable. Local examination revealed a vertical midline infraumbilical operative scar beside this other findings were unremarkable.

Investigation

- Routine blood investigation revealed Hb- 8.3g/dl, wbc- 5500/mm³, urea-31 mg/dl, creatinine- 1.1mg/dl, AST- 21U/L, ALT- 37U/L, Total protein- 7.0 g/dl and glucose- 73 mg/dl.
- Urine physical and biochemical analysis revealed straw coloured, aromatic clear urine with traces of protein. Culture was found sterile. UPT was negative.
- USG abdomen reported 5.6 x 3.2 x 4.5 cm mass in urinary bladder with suspended particle and debris.
- Screening CT and MRI pelvis reported a 4.9 x 2.4 cm mass suggestive of dead ectopic foetus in right adnexa migrated into urinary bladder through a small adjacent defect in bladder wall along with thickening and edema. Uterus and ovaries were found to be normal.
- Suspecting a case of ruptured ectopic pregnancy with a history of BLTL, the patient was subjected to lap and dye test, which surprisingly showed a patent right fallopian tube.

- On cystourethroscopy a 6 cm long and 3 cm wide comma shaped pedunculated mass with hair follicles on the surface arising from the right lateral wall of bladder was seen along with an adjacent defect in the bladder wall. Surrounding mucosal inflammation and edema was also noticed. Rest of the bladder wall and ureteric orifices were found to be normal.



Fig 1- USG abdomen showing intravesical mass (Red arrow)

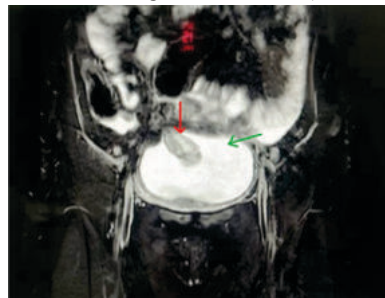


Fig 2- MRI pelvis showing an intravesical mass attached to right lateral wall of bladder (Red arrow- mass attached to bladder wall, Green arrow- urinary bladder)

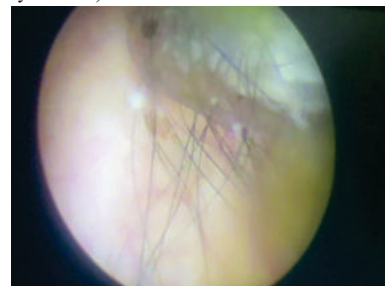


Fig 3- cystoscopic view of vesical mass showing hair follicles projecting from the surface.

Differential Diagnosis

Radiological imaging findings are suggestive of dead ectopic foetus in the urinary bladder but cystourethroscopic findings are more in favour

of vesical dermoid. Other causes of vesical mass may be benign or malignant neoplasm arising from bladder wall, bladder calculi, iatrogenic foreign body.

Treatment

This patient first underwent laparoscopic evaluation using 3 standard ports, bowel was found adhered with urinary bladder which was released by adhesiolysis. Further lap and dye test was performed using methylene blue mixed in saline, dye was seen extravasating from right fimbria while no extravasation was seen through left adnexa. In addition dye test was done through bladder and a copious amount of leak was seen inside peritoneal cavity through the bladder rent. Subsequently right tubal ligation was done laparoscopically and a 14 french drainage tube was placed in pelvis and secured to skin. In the same sitting suprapubic cystotomy was done, a 6 X 3 cm comma shaped mass with surface hair follicles was found attached to right lateral bladder wall. The mass was excised and sent for HPE.



Pic 4- Gross specimen excised from urinary bladder



Pic 5- Macroscopic cut section of the specimen showing solid component

Outcome

HPE findings were in favour of dermoid cyst with no evidence of trophoblastic cell and chorionic villi. Post operative course was uneventful and patient was discharged on 10th post op day. Patient came for follow up after 2 and 4 weeks and her systemic and local examination findings were found to be satisfactory with no further complaints.

DISCUSSION

Intravesical masses may be due to a variety of neoplastic and non neoplastic disorders. Majority of bladder tumors are epithelial neoplasms, nonneoplastic disorders can be inflammatory, infectious like tuberculosis and schistosomiasis, bladder stones, endometriosis and some rare conditions like intravesical ectopics or dermoids. Ectopic pregnancy in the bladder wall is a rare condition. It has been reported in patients having prior history of previous ectopic pregnancy, tubal surgery, pelvic inflammatory disease. A few cases of live fetus inside the urinary bladder has also been reported in which the fetus passed to bladder through a vesicouterine fistula in a patient having previous history of caesarean section³. Dermoid is an extremely rare cause of intravesical mass. Ovary is the most common site for dermoid cyst. Histologically dermoid may contain tissues from all 3 germ cell layers namely ectodermal components in the form of squamous epithelium, neuroectodermal remnant; mesodermal components in the form of tooth, bone, cartilage; and endodermal components in the form of intestinal mucosa or pancreatic tissues. Urinary bladder is a very

uncommon site of origin of dermoid cyst. Only 16 cases have been reported in the literature so far^{4,7}. Patients having vesical dermoid presents with dysuria, suprapubic pain, burning micturition. This is primarily diagnosed using radiological imaging techniques like USG, CT and MRI pelvis which will reveal the location of dermoid within the bladder, its attachment and extension with respect to the adjacent structures along with associated adnexal pathology. Cystoscopy is the gold standard investigation for diagnosing vesical dermoid which will show the vesical mass with surface hair follicles and its attachment with bladder wall. These cases are usually managed by laparoscopic partial cystectomy along with excision of the bladder mass. Our case was peculiar in a way that radiological findings were in favour of intravesical dead ectopic, contrary to which cystoscopy and subsequent HPE findings were more in favour of vesical dermoid. The Radiological findings were reviewed by a senior radiologist who was adamant on the earlier imaging reports. Histopathological slides were sent to a senior pathologist for second opinion which turned out to be a dermoid cyst with no evidence of trophoblast/fetal cells. As histopathological finding being more precise stands superior to radiological findings and a final consensus in favour of vesical dermoid which probably transmigrated through the adjacent bladder wall defect was made based on these reports.

CONCLUSION:

Intravesical dermoid is a rare entity, chances of foetus or product of conception inside urinary bladder is even more rare. Intravesical product of conception being more common in patients having prior history of caesarean section, ectopic pregnancy or tubal surgery. Radiological imaging like screening CT and MRI may sometime mislead the diagnosis, as it is difficult to interpret the vesical mass as dermoid or product of conception unless cardiac activity is present or definite fat attenuation is seen. Therefore, in such cases cystoscopy is gold standard for diagnosing vesical dermoid.

Acknowledgement:

Written consent was obtained from the patient prior to publication of this case report.

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