

Primary isolated echinococcal cyst of the seminal vesicle: A rare case

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Abstract

Hydatid disease of the organs other than liver and lung is extremely rare. Although hydatid disease is endemic in India, we report a rare case of hydatid cyst in a young male primarily involving the seminal vesicle and aim to highlight the management of such cases. A 23 year old male farmer diagnosed with primary isolated echinococcal cyst of the seminal vesicle has been presented. Thorough investigations with radiological methods such as ultrasonography (abdominal and trans-rectal), and magnetic resonance imaging were carried out to aid in the diagnosis. Surgical excision of the lesion was carried out with careful removal of the cyst to prevent any bursting and spillage, leaving the seminal vesicle preserved. The cystic lesion was subjected to histopathological examination. Histopathology confirmed the diagnosis of hydatid disease. Postoperative period was uncomplicated and patient was discharged on seventh postoperative day. Patient was put on albendazole (10 mg/kg/day) for three cycles of 21 days each with a gap of one week between each cycle. There was no evidence of recurrence or development of cysts elsewhere in the body during the 2 year follow-up. Hydatid cyst of seminal vesicle is rare and should be kept in differential diagnosis of a cystic lesion in pelvis especially in regions where hydatid disease is endemic. Proper surgical and medical management to avoid any recurrences, and a regular follow-up, are of utmost importance to detect any late complications such as local recurrence of the disease and development of hydatidosis at the primary sites.

Key Words: Echinococcosis, hydatid cyst, seminal vesicle

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INTRODUCTION

A hydatid cyst is a parasitosis caused by the larval form of *Echinococcus granulosus* or rarely *Echinococcus multilocularis*. The main hosts for *E. granulosus* are predators such as dogs, wolves, and foxes, while intermediate hosts include sheep, goats,

and cattle. Humans are a coincidental intermediate host. The organs affected most often are the liver (65-75%) and lungs (10-25%). Other locations are extremely rare, including the peritoneal cavity (8-18%), spleen (2-3%), kidneys (1-4%), uterus and adnexa (0.5-1%), subcutaneous (1-2%), pancreas (0.5- 0.8%), others (0.1-3%).^[1]

Primary hydatid cyst of the seminal vesicle is extremely rare even in the areas where disease is endemic.^[2] In this report, we present echinococcosis of this rare site which was incidentally diagnosed during investigating lower urinary tract symptoms in a young male. Imaging studies play an important role in diagnosis, and surgical removal of the cyst is the treatment of choice.

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CASE REPORT

A 23 year old farmer presented with lower urinary tract symptoms of 4 years duration. There was no history of pain, fever, hematuria or trauma. On examination respiratory, cardiovascular and abdominal examinations were inconclusive. Per-rectal examination revealed a normal prostate. Haematological investigations, urine examination, serum prostate specific antigen (PSA) and radiograph of the chest were normal. Abdominal ultrasonography [Figure 1] and TRUS (trans-rectal ultrasonography) [Figure 2] was also done which revealed a well defined, encapsulated, multiloculated cystic mass, about 7 × 8 cm in size in relation to right seminal vesicle without any solid component. Significant mass effect was seen on prostate and the urinary bladder. Magnetic resonance imaging (MRI) documented a multicystic lesion, about 9 × 8 × 7 cm in size, with multiple daughter cysts in relation to the right seminal vesicle, which was hypo intense on TIWI [Figure 3] and hyper intense on T2WI [Figures 4a and 4b]. ELISA for hydatid disease was negative. Patient was subjected to surgical exploration using lower abdominal midline incision and retro-vesicle approach. The hydatid cyst arising from the right seminal vesicle was confirmed, which was excised completely and seminal vesicle preserved. Histopathology confirmed the diagnosis of hydatid disease. Postoperative period was uncomplicated and patient was discharged on seventh postoperative day. Patient was put on albendazole (10 mg/kg/day) for three cycles of 21 days each with a gap of one week between each cycle. There was no evidence of recurrence or development of cysts elsewhere in the body during the 2 year follow-up.

DISCUSSION

Hydatid disease is more frequent in the sheep raising communities of Middle East, Central Europe, Australia, India,

Turkey and South America.^[2] Echinococcosis of the urogenital tract is a rare condition, and the kidney is the most frequently affected organ (2–4%). Seminal vesicle involvement is very uncommon and only a few cases have been reported in the literature.^[3–6] In most of these patients, coexistent echinococcal cysts were found in other sites, especially in the liver. Isolated pelvic and retroperitoneal hydatid cysts are exceedingly rare and a pathogenic origin via haematogenous or lymphatic routes has been proposed for cases in which primary visceral lesions are absent.^[5,7] Such cysts generally remain asymptomatic until their space occupying effect on adjacent organs elicits symptoms. Therefore, a pelvic hydatid cyst may present with voiding dysfunction, urinary retention, hemospermia and azoospermia. Accidental detection is not infrequent.^[2–4,6]

In the initial stages, the hydatid cyst is usually unilocular. As the cyst matures, it transforms itself into a larger multivesicular and occasionally multilocular cyst containing numerous daughter cysts. The walls of the cyst are usually thin, smooth and well defined with thin fluid within the cyst. The parasite dies once the nourishing fluid inside the cyst is exhausted followed by partial or complete calcification of the cyst wall. The most feared complication of echinococcosis is rupture of the cyst with anaphylactic allergic reaction in addition to causing the spread of the disease.^[5,6]

Routine laboratory tests can only reveal eosinophilia. A number of serological tests can be done for screening, diagnosis and follow up for recurrence of hydatid disease. Highly sensitive tests include indirect haemagglutination and Latex agglutination test. Confirmation of diagnosis can be done by highly specific tests including immunoelectrophoresis, double diffusion test, enzyme-linked immunosorbent assay (ELISA) and radioallergosorbant test.^[1,7] In our patient



Figure 1: Abdominal ultrasonography showing a well defined, encapsulated, multiloculated cystic mass, about 7 × 8 cm in size in relation to right seminal vesicle without any solid component. Significant mass effect was seen on prostate and the urinary bladder

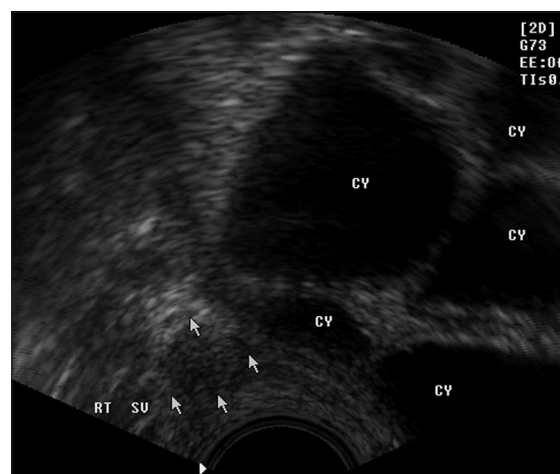


Figure 2: Trans-rectal ultrasonography showing a well defined, encapsulated, multiloculated cystic mass, about 7 × 8 cm in size in relation to right seminal vesicle without any solid component. Significant mass effect was seen on prostate and the urinary bladder



Figure 3: Axial T1WI Magnetic resonance imaging (MRI) showing hypointense, multicystic lesion about 9 × 8 × 7 cm in size, with multiple daughter cysts with multiple daughter cysts in relation to the right seminal vesicle

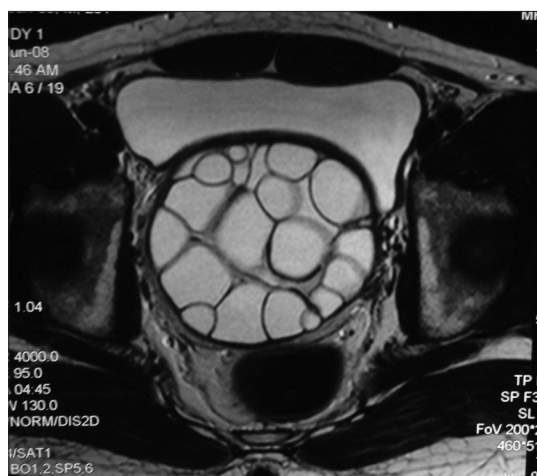


Figure 4a: Axial T2WI Magnetic resonance imaging (MRI) showing hyperintense, multicystic lesion about 9 × 8 × 7 cm in size, with multiple daughter cysts with multiple daughter cysts in relation to the right seminal vesicle

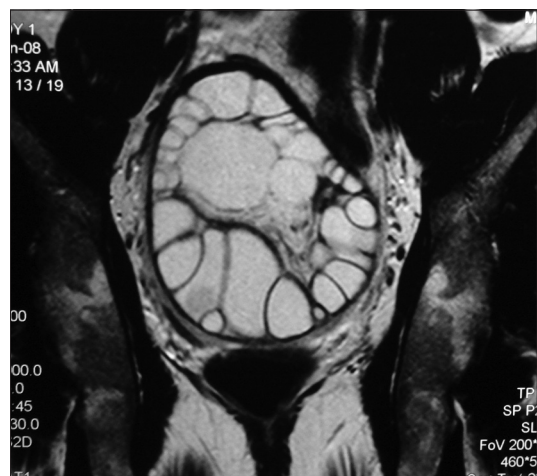


Figure 4b: Coronal T2WI Magnetic resonance imaging (MRI) showing hyperintense, multicystic lesion about 9 × 8 × 7 cm in size, with multiple daughter cysts with multiple daughter cysts in relation to the right seminal vesicle

ELISA for hydatid disease was negative. Imaging studies play a decisive role in the diagnosis of pelvic echinococcosis, especially Ultrasonography (USG) (abdominal and transrectal), computed tomography (CT) and MRI. Echinococcal cysts may appear thick-walled with multiple septations. Daughter cysts are often recognized inside a large mother cyst (cyst within the cyst appearance), as well as a fluid level due to the existence of 'hydatid sand'.^[3,5,6] We performed abdominal USG, trans-rectal ultrasonography and MRI in our patient which revealed a pelvic hydatid cyst in relation to the right seminal vesicle.

The differential diagnosis of pelvic echinococcosis may turn out quite challenging and should include congenital or acquired cyst of the seminal vesicles (parasitic, infectious or obstructive), cystic adenoma of the seminal vesicles, Mullerian duct cyst, cyst or diverticula of the vas deferens/ejaculatory duct, prostatic retention cyst, as well as primary retroperitoneal sarcoma, teratoma and leiomyoma.^[3]

Surgery remains the treatment of choice for hydatid cyst.^[1-7] Antihelminthic chemotherapy alone may be effective in 30-40% of patients. It is most effective in alveolar hydatid, less so for liver infections and essentially ineffective for the diseases of the bone, brain, eye and other sites.^[1] Hydatid cyst is best treated by complete excision of the cyst with extreme caution to avoid accidental puncture and parasite spillage. We treated our patient with total cystectomy (cystopericystectomy) with preservation of the seminal vesicle. Prophylactic albendazole was also used.

Late complications which should be kept in mind are the local recurrence of the disease and development of hydatidosis at the primary sites. The patient has to be kept on regular follow up paying attention to these possibilities.^[7]

CONCLUSION

In conclusion, hydatid cyst of seminal vesicle is rare and should be kept in differential diagnosis of a cystic lesion in pelvis especially in regions where hydatid disease is endemic. Proper surgical and medical management to avoid any recurrences, and a regular follow-up, are of utmost importance to detect any late complications such as local recurrence of the disease and development of hydatidosis at the primary sites.

REFERENCES

1. Palanivelu C. Laparoscopic management of hydatid cysts of liver. In: Palanivelu C. Art of laparoscopic surgery, 1st ed. New Delhi, Jaypee brothers medical publishers (P)Ltd; 2007. p. 757-83.
2. Safioleas M, Stamatakos M, Zervas A, Agapitos E. Hydatid disease of the seminal vesicle: A rare presentation of hydatid cyst. Int Urol Nephrol 2006;38:287-9.
3. Vasileios R, Athanasios P, Stavros T. Echinococcal cyst of the seminal vesicles: A case report and literature review. Int Urol Nephrol 2002-2003;34:527-30.

4. Shoshtari MZ, Shadpour P, Moradi NR, Moslemi M. Hydatid cyst of urinary tract; Eleven cases at single center. *Urol J (Tehran)* 2007;4:41-5.
5. Passomenos D, Dalamarinis C, Antonopoulos P, Sklavos H. Seminal vesicle hydatid cysts: CT features in two patients. *AJR Am J Roentgenol* 2004;182:1089-90.
6. Rastogi R. Giant solitary echinococcal cyst of the seminal vesicle: An uncommon cause of retention of urine. *Saudi J Kidney Dis Transpl* 2008;19:799-801.
7. Mushtaque M, Mir MF, Lone MA, Batt SA. Solitary subcutaneous gluteal hydatid cyst: A case report. *East J Med* 2010;15:76-9.

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