

## Case Report

# Rare as hen's teeth: laparoscopic management of primary pelvic hydatid cyst

Kopal Gupta<sup>1</sup>, Dron Sharma<sup>2\*</sup>

<sup>1</sup>Department of Medicine, <sup>2</sup>Department of Surgery, Shree Siddhi Vinayak Hospital, Bhilwara, Rajasthan, India

**Received:** 31 December 2021

**Accepted:** 15 January 2022

**\*Correspondence:**

Dr. Dron Sharma,

E-mail: [doctordronsharma@gmail.com](mailto:doctordronsharma@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

Hydatid disease is a zoonotic parasitic disease most frequently caused by echinococcus granulose Primary peritoneal hydatidosis is very rare. We report a case of primary hydatid disease of the intraperitoneal pelvic space. A 22-year-old male patient presented with a history of abdominal pain since 5 months. Abdominal examination revealed a smooth, firm, mildly tender, non-mobile lump in suprapubic region, on digital rectal examination, a smooth spherical mass was felt anteriorly and laterally outside the rectal wall, rectal mucosa was normal. All routine investigations including liver function tests were within normal limits Computed tomography scan of the whole abdomen showed giant cyst of 10×10 cm with multiple well-defined cysts in rectovesical pouch. Diagnostic laparoscopy was performed. The liver, spleen, mesentery, omentum was found to be normal. A large tense hydatid cyst was noted in the pelvic cavity. Partial peri-cystectomy with endo-cystectomy was performed. Postoperative period was uneventful and patient was discharged on 4th postoperative day. Primary intra-abdominal but extra-peritoneal localization has been reported in only 0.2-2% cases making it a very rare entity. The treatment of choice for pelvic hydatid cyst is principally a careful surgical excision. Here with minimum invasive technique this case was operated and results were excellent.

**Keywords:** Hydatid disease, Peri cystectomy, Endo-cystectomy, Primary pelvic hydatid cyst

### INTRODUCTION

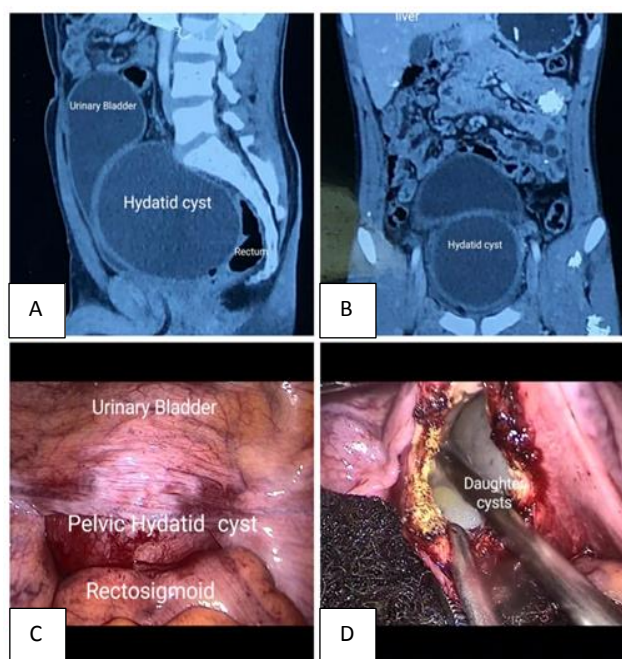
Hydatid disease is a zoonotic parasitic disease most frequently caused by echinococcus granulosus. Human is an accidental host and become infected after ingesting parasite's eggs.<sup>1</sup> Unusual sites of this disease can frequently cause diagnostic problems and lead to diagnostic delays and many potentially serious complications. Peritoneal hydatidosis could be either primary or more frequently secondary to hydatid cysts in liver or rarely in spleen. Primary peritoneal hydatidosis is very rare.<sup>2</sup> We report a case of primary hydatid disease of the intraperitoneal pelvic space

### CASE REPORT

A 22 -year-old male patient presented with a history of

abdominal pain since 5 months. On examination, he was not anemic, pulse 90/minute, and BP:120/70 mmHg. The respiratory and cardiovascular systems were normal. Abdominal examination revealed a smooth, firm, mildly tender, non-mobile lump in suprapubic region reaching approx. 5 cm above pubic symphysis, lower limit not palpable. On digital rectal examination, a smooth spherical mass was felt anteriorly and laterally outside the rectal wall, rectal mucosa was normal. All routine investigations including liver function tests were within normal limits. Serological evaluation for hydatid cyst was carried out with a positive result. Chest X-ray and X-ray abdomen was normal without calcification. Ultrasound examination revealed a cystic mass in the pelvis suggestive of a hydatid cyst. Liver and spleen were normal. Computed tomography scan of the whole abdomen showed giant cyst of 10×10 cm with multiple well-defined cysts in rectovesical pouch (Figure 1). The

diagnosis of peritoneal hydatid disease was made.



**Figure 1: (A) CT scan abdomen sagittal section showing hydatid cyst compressing urinary bladder and rectum; (B) CT scan abdomen coronal section showing distended urinary bladder above hydatid cyst; (C) intra-operative picture of pelvic hydatid cyst; and (D) opening of hydatid cyst cavity.**

Diagnostic laparoscopy was performed. The liver, spleen, mesentery, omentum was found to be normal. A large tense hydatid cyst was noted in the pelvic cavity, densely adhered anteriorly to urinary bladder, posteriorly to sigmoid mesocolon, rectum and laterally to iliac vessels. The surrounding area was packed with 10% povidone iodine solution and cyst was opened under controlled condition. All daughter cysts and laminated membrane removed completely. A part of ectocyst was excised and cavity was laid open and the part which was densely adherent to vital neighboring structures could not be removed-partial pericystectomy with endo-cystectomy (Figure 2). Peri cystic cavity was washed with 10% povidone iodine solution and 5% hypertonic saline was left within the cavity for 15-20 minutes to have effective scolicidal effect and then suctioned out. A drain was placed in pelvis and port sites were closed. Throughout the procedure precautions were taken to avoid spillage of cyst fluid and all intense measures were taken by anaesthetic team to avoid and manage anaphylaxis. Final diagnosis was confirmed by histopathological examination. Post operative period was uneventful and patient was started orally on the same day of operation, ambulated on post operative day 1. Drain was serous and minimal throughout the postoperative period and was removed on 2<sup>nd</sup> postoperative day. Patient was discharged on 4<sup>th</sup> postoperative day. Patient was put on 6 cycles of albendazole therapy (400 mg twice daily). Each cycle of

albendazole therapy was of 28 days duration. After each cycle patient was advised a gap period of 2 weeks, and in that period liver function test and complete blood counts were assessed and found to be normal. Patient was symptom free after 6 months of follow up.



**Figure 2: (A) Endo-cystectomy and removal of all daughter cysts; (B) pericystic cavity wash with 10% povidone iodine; (C) pericystectomy; and (D) post-operative specimen of daughter cysts.**

## DISCUSSION

Extra-peritoneal hydatid cyst usually occur secondary to rupture of hepatic hydatid or accidental spillage of the daughter cysts during surgery. Primary intra-abdominal but extra-peritoneal localization has been reported in only 0.2-2% cases making it a very rare entity.<sup>3</sup> Primary extra-peritoneal hydatid cysts have mostly been reported from Mediterranean regions where the disease is endemic.<sup>4</sup> A small primary hydatid cyst of the liver may rupture and then undergo spontaneous resolution, while their content gets seeded into the pelvis.<sup>5</sup> This is the probable pathogenesis of isolated pelvic hydatid cyst. There are no specific clinical features of primary pelvic hydatid cyst, often presents as an unusual pelvic mass with pressure effects on adjacent organs leading to clinical features like obstructive uropathy, renal failure, constipation, obstructed labour, menstrual irregularities, infertility, foot drop.<sup>6,7</sup> Surgery is the optimal treatment of the pelvic hydatid disease. Radical resectional procedure or en bloc resection that removes the entire peri cyst is the surgical technique of choice. Partial cystectomy or tissue sparing procedures are alternative surgical procedures in cases where the ectocyst is densely adhered to the surrounding

vital structures and its removal can be more harmful.<sup>8</sup>

## CONCLUSION

The treatment of choice for pelvic hydatid cyst is principally a careful surgical excision. Here with minimum invasive technique this case was operated and results were excellent.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

## REFERENCES

1. Lewall DB. Hydatid disease: biology, pathology, imaging and classification. Clin Radiol. 1998;53(12):863-74.
2. Khuroo MS. Hydatid disease: current status and recent advances. Ann Saudi Med. 2002;22(1-2):56-64.
3. Arazi M, Erikoglu M, Odev K. Primary echinococcus infestation of the bone and muscles. Clin Orthop Relat Res. 2005;432:234-41.
4. Akbulut S, Senol A, Ekin A, Bakir S, Bayan K, Dursun M. Primary retroperitoneal hydatid cyst: Report of 2 cases and review of 41 published cases. Int Surg. 2010;95:189-96.
5. Angulo JC, Escribano J, Diego A, Sanchez-Chapado M. Isolated retrovesical and extrarenal retroperitoneal hydatidosis: Clinical study of 10 cases and literature review. J Urol. 1998;159:76-82.
6. Ait Benkaddour Y, Mansouri MZ, Rabbani K. Primary pelvic hydatidcyst: an unusual cause of cystic adnexal image (mass). Afr J Reprod Health. 2013;17(1):174-7.
7. Gupta A, Kakkar A, Chaddha M. A primary intrapelvic hydatid cyst presenting with foot drop and a gluteal swelling. J Bone Jt Surg (Br). 1998;(80-B):1037-9.
8. Parray FQ, Ahmad SZ, Sherwani AY. Primary paraspinal hydatid cyst: a rare presentation of echinococcosis. Int J Surg. 2010;8(5):404-6.

**Cite this article as:** Gupta K, Sharma D. Rare as hen's teeth: laparoscopic management of primary pelvic hydatid cyst. Int J Adv Med 2022;9:173-5.