

Laparoscopic Palanivelu-hydatid-system aided management of retrovesical hydatid cyst

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ABSTRACT

Hydatid cysts of the retrovesical region are rare. They are often adherent to the adjacent bowel and bladder, and complete removal is associated with potential injuries. The Palanivelu hydatid system allows minimally invasive treatment of hydatid cysts with no adjacent organ injuries. We describe the laparoscopic management of a pelvic hydatid cyst using this system.

Key words: Echinococcus, hydatid, laparoscopy, pelvis

INTRODUCTION

Hydatid cysts are rare in the urinary tract (2% of all hydatid disease) as are isolated cysts of the pelvis.^[1,2] These have been conventionally treated by laparotomy and excision. The retrovesical location of these cysts makes surgical excision fraught with potential complications such as bladder and bowel injury and denervation of the bladder. The Palanivelu hydatid system (PHS) is a recently described device that allows removal of the internal contents and the endocyst without the need for excising the entire cyst.^[3] This has potential advantages for cysts located deep in the pelvis, and we describe the first case in the literature of laparoscopically treating a pelvic hydatid cyst with the PHS.

CASE REPORT

A 55-year-old man presented with lower abdominal pain of 4 months duration. He had no urinary, bowel, or systemic symptoms. There were no abnormal physical or laboratory findings, no mass was palpable on a rectal

examination. An X-ray of the abdomen showed the presence of a calcified mass around the right seminal vesicle [Figure 1]. A CT scan of the abdomen and pelvis confirmed an isolated well-defined lesion (6.5 × 5.6 cm²) in the right hemipelvis with parenchymal calcification, internal septae, and debris suggestive of hydatid cyst; adherent to both the bladder and rectum [Figure 2]. His serology for *Echinococcus* (IgG by enzyme-linked immunosorbent assay system) was negative.

With a diagnosis of retrovesical hydatid cyst, the patient was started on oral albendazole (15 mg/kg/d in two divided doses) and scheduled for laparoscopic removal. In the supine position, four transperitoneal ports were used, a 12-mm camera port above the umbilicus in the midline, two pararectal ports (12 mm, 5 mm) below the umbilicus and one laterally placed (5 mm) in the right iliac fossa. The cranial-most part of the cyst that was directly visible on laparoscopy was thickly calcified and adherent to the



Figure 1: Plain X-ray showing calcified mass in the pelvis

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	DOI:
	10.4103/0970-1591.109987

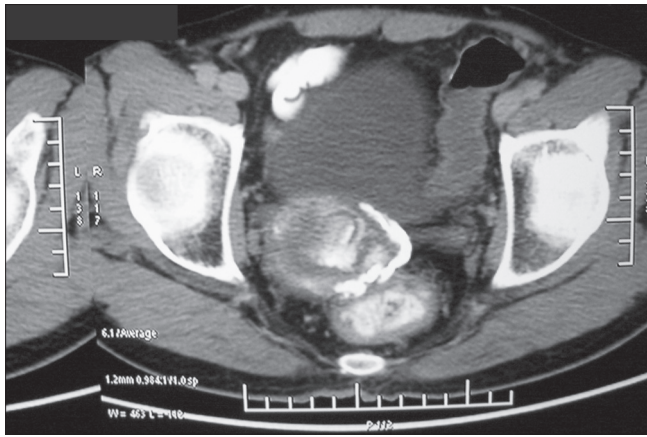


Figure 2: Axial computerized tomogram showing calcified pelvic hydatid adherent to the urinary bladder and the rectum

sigmoid colon and the bladder. The ectocyst in this region was separated from these two structures circumferentially till a noncalcified part was identified on the anterior surface. Betadine-soaked gauze was packed around the cyst, and the PHS was inserted into the cyst through a 2-cm suprapubic incision. The contents of the cyst were aspirated, and hypertonic saline was instilled into the cavity as a scolicedal agent. The cycle of aspiration and flushing was repeated thrice before removing the PHS. The calcified cap of the ectocyst was laparoscopically excised, and the visualized cavity was again scraped and aspirated. The pelvis was washed with saline before exiting the abdomen.

The operative time was 3 h, and the blood loss was 120 mL. There were no complications, and the patient was discharged on day 2 with advice to continue albendazole for 3 weeks. He is symptom-free at 6 weeks follow-up.

DISCUSSION

Isolated hydatid cysts of the retrovesical region are rare.^[2] While traditional surgical approaches have focussed on

complete excision,^[4] recent reports support aspiration and removal of endocyst as being adequate for management.^[5] The major concerns with surgery for hydatid disease were due to spillage of highly immunogenic contents leading to anaphylactic reactions and a possibility of disseminated hydatidosis due to implantation of the spilled scolices. Traditional surgery thus required total or partial excision of the cyst, without spillage of contents but is associated with a wide range of complications.^[4] The PHS has primarily been described for the management of hepatobiliary hydatid cysts where complete excision was extremely difficult.^[3] It allows minimally invasive management with low chances of spillage of fluid or injury to adjacent organs. It has not previously been described for hydatid cysts of the pelvis or the urinary tract. The use of this technique in the pelvis, particularly for lesions with dense adhesions to surrounding structures, allows a safe minimally invasive option to the existing surgical techniques.

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How to cite this article: Subramaniam B, Abrol N, Kumar R. Laparoscopic Palanivelu-hydatid-system aided management of retrovesical hydatid cyst. *Indian J Urol* 2013;29:59-60.

Source of Support: Nil, **Conflict of Interest:** None declared.