

## A Rare Case of Multiple Pelvic Hydatid Cyst

Kalpana Mahadik<sup>1</sup> · Kunjan Ladikar<sup>1</sup>

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### About the Author



**Kalpana Mahadik** is graduate and postgraduate from GMC, Nagpur. She has teaching experience of 16 years and has conducted all types of major surgeries. She has presented many research papers in National and International conferences. She has 16 publications in International and 4 in National Journals. She is a postgraduate examiner to many universities. Her paper on Microalbuminuria as screening for preeclampsia was very much appreciated in 66th JSOG, Tokyo, Japan.

### Introduction

Hydatid disease has a wide geographic distribution and is considered an important global public health problem which is influenced by the socioeconomic status of the population. Migration also spreads this disease. The state of Kashmir, India, is endemic for hydatid disease. In endemic areas, any patient presenting with a cystic mass, in any tissue or organ, should be considered a potential case of hydatid disease. Human echinococcosis is caused by infection with the larval stage of genus *Echinococcus granulosus* and *Echinococcus multilocularis*. Primary hydatid cyst in the pelvis is an extremely rare site of the disease [1]. Only 0.2–0.9% of all echinococcal cysts have been reported in the female pelvis, with most located in the

ovary, parametrium, or adnexa and occasionally in the omentum with adherence to the pelvic organs [2, 3]. Primary pelvic echinococcosis is exceptional even in endemic countries; it generates significant diagnostic difficulties as the symptoms are non-specific (Fig. 1).

### Clinical Picture

A 40-year-old female (para 4 living 4) presented with pain in epigastric region since one and a half year and lump in abdomen since 6 months. She had normal menstrual cycles. On per abdomen examination, a cystic, mobile, non-tender mass with well-defined margins, smooth surface of about 14–16-week-size gravid uterus was palpable. Complete blood count including white cell count, differential count, renal function tests, liver function tests, random blood sugar, and urinalysis were normal. Ultrasound examination showed a large, well-defined, cystic mass of pelvic origin suggestive of ovarian cyst. Patient underwent exploratory laparotomy. Intraoperatively, a large cystic lesion was present on anterior

Kalpana Mahadik and Kunjan Ladikar at R.D. Gardi Medical College.

✉ Kalpana Mahadik  
[kalpanavmahadik@hotmail.com](mailto:kalpanavmahadik@hotmail.com)

<sup>1</sup> R.D. Gardi Medical College, Ujjain 456006, India



**Fig. 1** Specimen of uterus with cervix showing a large cystic lesion on anterior uterine wall and multiple pelvic hydatid cysts

uterine wall and similar cystic lesions were present in the left broad ligament as well as pouch of Douglas. Uterus was enlarged to 12 weeks size. Both broad ligaments were full of multiple cystic lesions of size 2–6 cm. Single largest cyst was 6 × 6 cm, present on isthmus of uterus. The uterus with cyst was mobile. Ten to fourteen cysts were excised en mass. Two of them ruptured spontaneously; immediate suction was done. It was not possible to segregate the rest of the peritoneal cavity from lesions as they were multiple in nature. Abdominal hysterectomy with left salpingo-oophrectomy was done. Two cysts of size 2 × 2 cm could not be dissected out from pouch of Douglas as they were deep in the pelvis. Postoperative period of the patient was uneventful. She was given tablet albendazole 1 g daily for 1 month. Stitches were removed on 8th postoperative day. Patient came for follow-up after 4 weeks with no complaints. Intraoperatively, diagnosis of multiple hydatid cysts was made. Histopathology report confirmed hydatid cyst. Patient is well after three months without any complaint.

## Discussion

Humans are accidental intermediate hosts in the life cycle of the parasitic tapeworm genus *Echinococcus*. This infection is prevalent in countries where people keep cattle, sheep, and dogs in their vicinity, such as the

Mediterranean region, Middle Europe, South America, Middle East, East Africa, and Australia. Humans become infected by handling soil, dirt, animal feces, or hair that contains eggs. *Echinococcus granulosus* can reach any organ or tissue of the body where it develops into a hydatid cyst. *Echinococcus* cyst are found more frequently in the liver (60%), followed by the lungs (15%), but they can occur anywhere in the body [2]. The pelvic organ in women is rarely the primary site of cyst formation. Location at unusual sites in the body can have atypical presentations and can pose a diagnostic challenge. A high index of suspicion and radiological investigations are necessary in establishing the diagnosis of hydatid disease at unusual sites in the body. The hydatid embryo gains access to the pelvis by hematogenous or lymphatic route. The cyst may remain asymptomatic for a long period of time and may be discovered incidentally or cause irritation or compression symptoms. Ultrasound is the preferred first-line imaging, but CECT gives more precise information regarding the morphology [3]. A comprehensive approach, including epidemiological, clinical, and semiological analysis and ultrasound in any patient with a pelvic mass would help determine the diagnosis and an adapted therapeutic strategy. Surgery is the most effective treatment [4]. En bloc resection without inducing rupture and spreading the daughter cyst is the recommended treatment and is accepted to be curative. The optimal treatment is total cystectomy regardless of the location or, when impossible, unroofing and drainage followed by adjuvant antihelminthic therapy is the suboptimal treatment of choice. Prognosis is usually favorable after treatment in primary and unique location, but more severe in disseminated disease.

## Conclusion

The uniqueness of primary hydatid disease in gynecologic practice causes diagnostic problems. Pelvic hydatid cyst in women may be mistaken for the cysts of the genital organs, because they arise in the pelvic cellular tissues. Mistaken diagnosis of ovarian cyst needs attention, and we should keep this diagnosis in mind though it is rare. Pelvic echinococcosis may simulate malignancies and mimic a multicystic ovary. A hydatid cyst in the broad ligament may simulate a pedunculated fibroid or a parovarian cyst. Surgery followed by histomorphology clinches the diagnosis. A pelvic hydatid cyst is in most cases diagnosed intraoperatively, but the disease should be taken into consideration in cases of cystic tumors of unclear origin, especially in endemic regions and in persons with positive

history of keeping pets. The most important factor in diagnosis of hydatid disease of the pelvic cavity is the high index of suspicion.

#### **Compliance with Ethical Standards**

**Conflict of interest** Authors declare that they have no conflict of interest.

**Ethical Approval** This case report text was approved by Institutional Ethics Committee. An informed written consent was taken from the patient after explaining about the study.

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