Section: Obstetrics and Gynaecology

Case Report

THE FORGOTTEN PARASITE: A RARE CASE REPORT OF PELVIC HYDATID CYST

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ABSTRACT

Hydatid disease, or echinococcosis, is a parasitic infection caused by the larval form of Echinococcus granulosus. While the liver and lungs are common sites of involvement, pelvic hydatid cysts represent a rare and often unexpected presentation. We present a unique case of a 16-year-old girl who presented with chronic pelvic pain and was found to have bilateral adnexal masses with elevated CA-125, raising suspicion for ovarian malignancy or endometrioma. Diagnostic laparoscopy revealed a cyst in the pouch of Douglas with a thick yellow wall and straw-coloured fluid in the pelvis. The histopathological diagnosis confirmed a hydatid cyst. This case highlights the importance of considering parasitic infections in the differential diagnosis of pelvic masses, especially in endemic areas or in patients with a relevant travel or exposure history.

Keywords: Pelvic hydatidosis, Hydatid disease, Echinococcosis, Pelvic mass

INTRODUCTION

Hydatid disease is a zoonotic parasitic infection primarily caused by the larval stage of Echinococcus granulosus, transmitted to humans via contact with infected animals or ingestion of contaminated food or water. The disease remains endemic in parts of the Middle East, Africa, South America, Central Asia, and the Indian subcontinent. In humans, hydatid cysts most commonly affect the liver (70%) and lungs (20%), with pelvic involvement being extremely rare (<2%).[1,2]

Pelvic hydatid disease is difficult to diagnose due to its non-specific symptoms and resemblance to other gynecological conditions such as endometriosis, tubo-ovarian abscess, or ovarian tumors. In adolescents, such a presentation is even more rare and poses a diagnostic challenge.[1,2]

We report a case of an adolescent female who presented with chronic pelvic pain and an adnexal mass, initially suspected to be an endometrioma or neoplasm, but histologically confirmed to be a ruptured pelvic hydatid cyst. This case underscores the importance of maintaining a broad differential and the role of thorough history-taking and histopathological confirmation.

CASE REPORT

A 16-year-old girl presented to the gynecology outpatient department with complaints of chronic lower abdominal pain for six months, worsening over the past few weeks. The pain was dull, non-radiating, and persistent, with occasional exacerbations. She had attained menarche at the age of 13 and had regular menstrual cycles associated with severe dysmenorrhea/ She denied any urinary or bowel symptoms, fever, weight loss, or history of trauma.

She had no history of sexual activity or known pelvic inflammatory disease. Family history was non-contributory, and there was no known history of tuberculosis. Initial clinical examination revealed mild lower abdominal tenderness without palpable masses. Per rectal examination noted fullness in the pouch of Douglas.

Initial investigations showed complete blood count within normal limits, negative beta-hCG, and ultrasound pelvis revealed bilateral complex adnexal cysts, largest measuring 5.5 cm on the left and 4.8 cm on the right. Thin septations and low-level internal echoes suggested the possibility of endometriomas or neoplastic cysts. Serum CA-125 was elevated at 382 IU/mL (normal <35 IU/mL).

Further evaluation done, MRI Pelvis showed bilateral complex cystic lesions with T1 hyperintensity and no definite solid components. The lesion in the pouch of Douglas was complex with thickened walls and irregular margins. No diffusion restriction or ascites was noted. Suspicion was low for malignancy, but a differential of atypical endometrioma was entertained.

Given the elevated CA-125 and the uncertain nature of the cysts, further imaging was performed to rule out disseminated malignancy or other primary sources. CT Chest and Abdomen showed no evidence of metastatic lesions.

Echinococcus Serology: Not performed at this stage as parasitic infection was not initially suspected.

Diagnostic laparoscopy was carried out for definitive diagnosis and potential excision after pre op preparation and obtaining consent. Intraoperatively it was noted there was moderate straw-colored fluid in the pelvis. A cystic mass with a thick yellow wall was identified in the pouch of Douglas, adherent to the posterior uterine wall and rectum. The lesion appeared ruptured with evidence of leakage. Both ovaries were visualized adhered to surrounding structures and contained haemorrhagic cysts, endometrioma of about 3-4 cm. There was no evidence of disseminated peritoneal disease or other cysts. The cyst was carefully excised, and a thorough peritoneal wash was performed with warm saline. The specimen was sent for histopathological examination.

Histopathology reported a thick-walled cyst with yellow laminated membranes on gross examination. Microscopic analysis showed laminated chitinous cyst wall with germinal layer and scolices. There was no evidence of malignancy or endometrial tissue. Final diagnosis of Hydatid cyst (Echinococcus granulosus) was made. (3,4)

The patient recovered well post-operatively with no complications. On follow-up, the histopathology result prompted a review of exposure history. When questioned further, the patient's mother recalled being treated for a pulmonary hydatid cyst several years prior. The family had lived in a region with exposure to dogs and sheep during the patient's early childhood.

On this basis, a diagnosis of secondary pelvic hydatid cyst was established, possibly due to hematogenous dissemination or peritoneal seeding.

She was started on Albendazole 400 mg twice daily for six weeks under infectious disease supervision and referred for infectious disease follow-up and imaging surveillance.

DISCUSSION

Hydatid disease remains endemic in rural agricultural communities with close contact with dogs, sheep, or contaminated water. The definitive hosts are dogs, while sheep and humans act as intermediate hosts.

Ingestion of eggs leads to hematogenous dissemination of the oncospheres, which preferentially settle in the liver (first filter) and lungs (second filter). Unusual locations such as the pelvis, brain, bone, and heart occur in 10% of cases.[1]

In rare cases like this, isolated pelvic involvement occurs, either through hematogenous spread bypassing the liver and lungs, lymphatic dissemination, secondary implantation from ruptured abdominal cysts (e.g., after undiagnosed hepatic cyst rupture).[5,6]

Pelvic hydatid cysts are often asymptomatic until large, when they cause chronic pelvic pain, pressure symptoms on bladder or rectum, menstrual irregularities and infertility.

This case underscores the diagnostic difficulty of hydatid disease in the pelvis due to nonspecific symptoms and radiological resemblance to endometrioma, tubo-ovarian abscess, or malignancy, Elevated CA-125 is nonspecific, which may also occur with benign inflammatory conditions.[7]

Serological tests (ELISA, indirect hemagglutination) can support diagnosis but are less sensitive for extrahepatic disease.

Radiological features that may hint at hydatid disease include multiloculated cysts, daughter cysts, calcified walls, floating membranes ("water lily" sign on ultrasound). However, none were present in our patient, reinforcing the need for histopathology in ambiguous cases.[8]

Surgical excision remains the cornerstone of treatment, aiming for complete removal without rupture. Laparoscopy is preferred in uncomplicated cases. Intraoperative precautions include isolation, use of scolicidal agents (e.g., hypertonic saline), and avoiding spillage.[9]

Medical therapy with Albendazole is recommended postoperatively for at least 4–6 weeks to prevent recurrence. In ruptured or disseminated cases, long-term antiparasitic therapy and surveillance imaging are needed.[10]

Learning Points

Hydatid cyst should be considered in the differential diagnosis of pelvic masses in endemic areas or those with relevant travel or exposure history.

CA-125 elevation is not pathognomonic for malignancy and can occur with parasitic infections.

Imaging alone may not be diagnostic; histopathology remains the gold standard.

Laparoscopy provides a safe, minimally invasive diagnostic and therapeutic option for complex pelvic pathology.

A thorough retrospective family history can be invaluable in rare cases.

CONCLUSION

This case illustrates a rare presentation of pelvic hydatid disease in an adolescent girl, masquerading as endometriosis or neoplasia. It underscores the

importance of considering parasitic infections in the differential of complex pelvic masses, especially in endemic populations or with family history of hydatid disease. Early surgical intervention and histopathological confirmation are key to timely diagnosis and management.

REFERENCES

1. McManus DP, Zhang W, Li J, Bartley PB. Echinococcosis. Lancet. 2003;362(9392):1295-304.
2. Moro P, Schantz PM. Echinococcosis: a review. Int J Infect Dis. 2009;13(2):125–133.
3. Lewall DB. Hydatid disease: biology, pathology, imaging and classification. Clin Radiol. 1998;53(12):863–874.
4. Dziri C. Hydatid disease—continuing serious public health problem: introduction. World J Surg. 2001;25(1):1–3.
5. Khanna R, et al. Primary pelvic hydatid cyst: a rare site of occurrence. Br J Radiol. 2003;76(910): 94–96.
6. Acar T, Tuncyurek M. Pelvic echinococcosis: report of two cases. Eur J Obstet Gynecol Reprod Biol. 1996;68(1-2):99–101.
7. Choi SH, et al. Elevated serum CA-125 in non-malignant conditions. Korean J Intern Med. 1993;8(2):114–119.
8. Kjossev KT, et al. Pelvic hydatid disease mimicking ovarian carcinoma. Gynecol Obstet Invest. 1995;39(2):145–148.
9. Sayek I, Onat D. Diagnosis and treatment of uncomplicated hydatid cyst of the liver. World J Surg. 2001;25(1):21–27.
10. Horton J. Albendazole: a review of anthelmintic efficacy and safety in humans. Parasitology. 2000;121(S1):S113–S132.