

Primary Infertility from Bilateral Ovarian Hydatid Cysts: A Case Report

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Abstract

Hydatid disease is a parasitic infection. The causative organism is Echinococcus which is a parasitic tapeworm. Its larval stage can survive in various regions of the human body, especially the liver. However, the primary ovarian location is very unusual. In our case, the patient with primary infertility had bilateral ovarian cysts on sonogram which in histopathology were found to be hydatid cysts.

Introduction

Echinococcosis is another name for hydatid disease. The involved parasite Echinococcus granulosus is a 2 mm to 7 mm long tapeworm [1]. Most infections in humans are asymptomatic, but they can be harmful due to the tendency of parasites to grow as slowly enlarging cysts in the liver, lungs, and other organs. These are often unnoticed and neglected for years [1]. The infection in humans is caused by accidental consumption of parasite cysts *via* soil, food, or water contaminated by infected dog feces [1]. After ingestion of the tapeworm cysts, the larvae are released from the eggs. These penetrate the intestine, and subsequently the blood circulation [1]. Hydatid cysts in the pelvis are very infrequent, especially as the principal localization. The incidence of such occurrence is reported to be 0.2% to 2.25%. [2]. According to our search of the literature, most patients were presented with acute symptoms like pain in the abdomen, fever, or feeling of an abdominal lump. We are

reporting here a rare case of a 22-year-old female who had a history of dysmenorrhea and primary infertility of 5 years duration.

Case Presentation

A 23-year-old female from Afghanistan came to a tertiary care hospital in Karachi with complaints of primary infertility and dysmenorrhea. There was a history of infertility for the last 5 years and her ultrasound of the abdomen pelvis showed bilateral ovarian cystic lesions. The remaining abdominal and pelvic organs were unremarkable. A bilateral oophorectomy was done, and the specimen was sent to our center for histopathological examination. On gross examination (Figure 1), there were two separate ovarian cysts labeled as right and left each measuring 8.0 cm × 4.0.1.0 cm and 7.0 × cm 5.0 cm × 4.0 cm respectively. Both cysts were multiloculated with solid and cystic cut surfaces. Multiple small daughter cysts were also present in the container. The cyst wall was soft with a glove-like consistency. On microscopy, a cyst wall was identified comprising of a laminated layer. Although not all three layers of the cyst wall were seen in each section, multiple daughter cysts (protoscolices) detached from the wall were identified. Since there was no evidence of cystic lesions in the liver or any other organ on sonography as well as no history of hepatic hydatid cyst, this case was labeled as a primary bilateral ovarian hydatid cyst (Figures 2 and 3).



Figure 1: Gross Picture of the ovary with the solid cystic cut surface (left side) and hydatid cyst wall (right side).

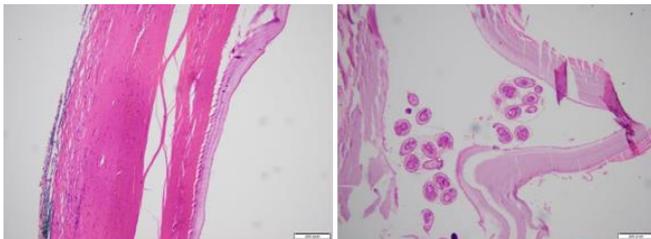


Figure 2: Hydatid cyst with laminated membrane.

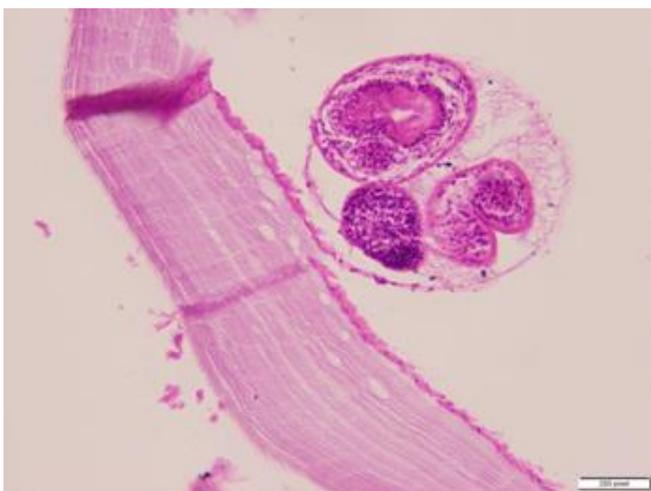


Figure 3: High Power View of Protoscolices (parasite larvae) with hooklets and suckers.

Discussion

According to the World Health Organization (WHO), more than 1 million people worldwide are affected with echinococcosis at any one time. It is also listed in the neglected tropical diseases by W.H.O [3]. It is endemic in Central Asia and China with the highest prevalence in rural areas where livestock production is highest. Echinococcosis in humans results in the development of one or more hydatid cysts situated most often in the liver and lungs, but organs of the body can also be involved [3]. However, its involvement in visceral organs like the ovary is a rare occurrence [4]. Various Imaging Modalities Namely Ultrasound (US), Magnetic Resonance Imaging (MRI), and Computerized Tomography (CT) scans are used to establish the diagnosis. It can appear as a solid cystic mass on these modalities and can mimic malignancy [5].

Conclusion

Primary bilateral ovarian hydatid cysts are a very unusual location for the disease, and it must always be kept in mind that an adnexal mass can be the result of Hydatid cyst disease. Care should be taken to differentiate this disease from other pathologies like polycystic ovarian disease during clinical practice. Also, this cyst being of infective etiology could be another cause of primary infertility as seen in the patient in this report. The treatment involves the removal of cysts by surgery followed by anthelmintic drug therapy to decrease the recurrence rate.

Consent

Consent was taken from the patient for the publication of this case report and associated images.

Ethical Approval

The present case report does not contain any private data that could lead to the identification of the patient. Therefore, it is exempt from ethical approval.

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