

Association between Ovarian and Splenic Hydatid Cyst

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Abstract

Case Report

Hydatid disease (human echinococcosis, hydatidosis) is a parasitic infestation caused by *Echinococcus granulosus*. This case reports an unusual case of ovarian and splenic hydatid cysts: A 65 years old woman was referred for pelvic mass associated to chronic pelvic pain, vaginal ultrasonography showed a well-defined image of a large multilocular cystic lesion, abdominal ultrasonography showed a multilocular cystic splenic lesion, and another multi-partitioned mass in the right adnexal region, abdomio-pelvic scan showed a splenic hydatid cyst type III with another cyst in the vesico-uterine fold, hysterectomy and bilateral salpingo-oophorectomy with partial omentectomy and splenectomy were performed, histological examination of the surgical piece was consistent with hydatid cyst.

Keywords: Hydatid, ovarian, splenic, cysts.

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INTRODUCTION

Hydatid disease (human echinococcosis, hydatidosis) is a parasitic infestation caused by *Echinococcus granulosus*. It can be found anywhere in the world but especially endemic in the Mediterranean, Eastern Europe, Middle East, South America, Australia and New Zealand [1, 2].

The parasite resides in the intestines of the definitive host (dogs and foxes), it will be transmitted to the intermediate host (sheep and humans) by the ingestion of the eggs released in the feces of the definitive host.

After ingestion, the larval forms of the parasite penetrate the intestinal wall and migrate through the circulatory system to most common organs for cyst formation: mainly the liver (75%) and lungs (5-15%). If the larval form gets through the first filters that are the liver and lung sit could reach any part of the human body such as spleen, ovaries, uterus... [3].

Primary ovarian and retroperitoneal hydatid disease is very rare with few reported cases [15, 16]. The clinical signs of pelvic hydatidosis are non-specific it could be associated with occasional dull pain or acute diffuse peritonitis. Anaphylactic shock, due to cyst rupture, and fluid draining to the abdominal cavity after surgery, are the most severe complications of hydatid disease, which have a high risk of mortality.

The aim of this study is to report the unusual location of the hydatid disease we report an unusual case of ovarian and splenic hydatid cysts.

CASE REPORT

A 65 years old woman in menopause for 16 years coming from a rural area in Morocco was referred for pelvic mass associated to chronic pelvic pain. No abnormality was detected on systemic and gynecological examination. Vaginal ultrasonography showed a well-defined image of a large multilocular cystic lesion. It was localized in the right adnexal region and measured 61 × 67 mm.

Abdominal ultrasonography showed a multilocular cystic splenic lesion consistent with hydatid cyst type III, which measured 80mm, and another multi-partitioned mass in the right adnexal region.

The abdomio-pelvic scan showed a splenic hydatid cyst type III with another cyst in the vesico-uterine fold that measured 60 x 55mm (Figure 1, 2).

After concertation between gynecologic and general surgeons, two surgeries were performed: At first: Hysterectomy and bilateral salpingo-oophorectomy with partial omentectomy Since the characteristics of the lesion were suspicious to avoid the risk of extension or another surgical act (Figure 3, 4).

Secondly: Splenectomy

The postoperative course was remarkable. Histological examination of the surgical pieces was consistent with hydatid cyst (Figure-5) Albendazole was prescribed to the patient for 6 months.

One year after the surgical intervention, the physical examination, abdominal and vaginal ultrasonography were satisfying.

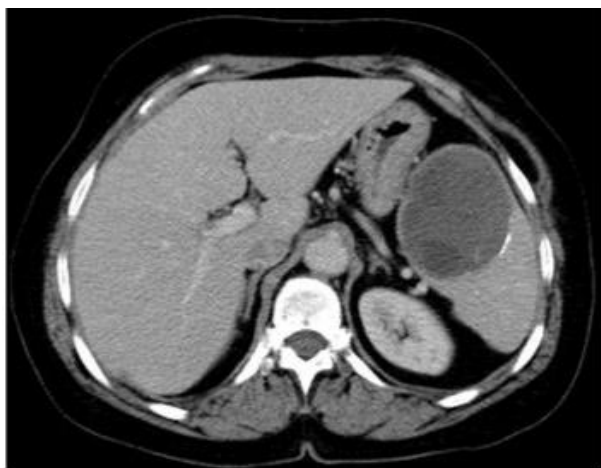


Fig-1: Abdomio-pelvic scan showing a splenic hydatid cyst type III



Fig-2: Abdomio-pelvic scan showing a vesico-uterine cyst

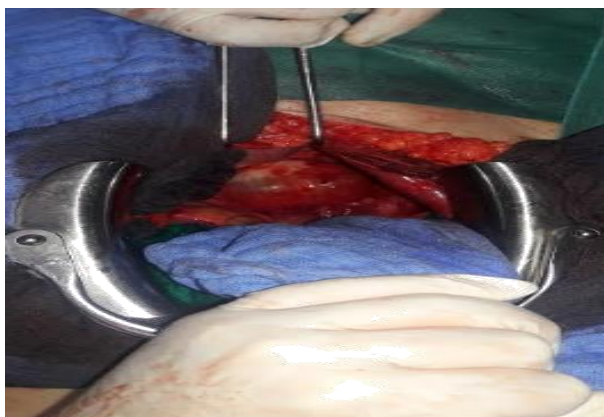


Fig-3: Image showing the uterine cyst during intervention



Fig-4: Image showing the radical hysterectomy specimen with the uterine cyst

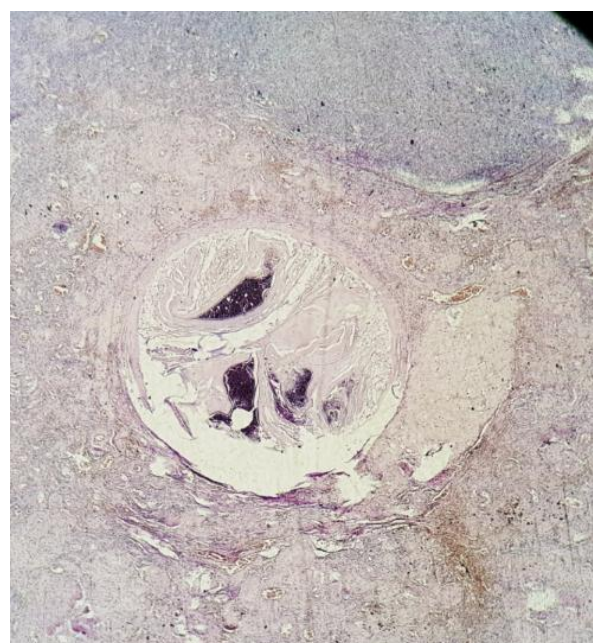


Fig-5: Hydatid calcified cyst in ovarian parenchyma (HES*200)

DISCUSSION

Liver and lungs are the most frequently organs affected by hydatid cyst, occurrence of hydatid cyst in pelvis is rare, about 0.2–0.9 % of hydatid disease cases [4-6].

It appears typically in women with a history of liver hydatidosis [9]. In our case the patient had two different localizations of hydatid cyst (ovarian and splenic).

Its diagnosis is strongly suspected on patients with primitive lung hydatid cyst. However, it is not simple for patients who don't have any symptom of hydatid disease [8].

The clinical signs of pelvic hydatidosis are non-specific. Serology, ultrasonography and computed tomography scan strongly support the diagnosis [1].

These cysts may interact with functional ovarian structures causing abdominal pain, menstrual disorders or infertility because of anatomical distortion or compression [9-11], none of these symptoms was found.

The perfect way to help diagnose a hydatid cyst is the ultrasonography, it is cost-effective in endemic areas. Hydatid cysts were classified as proposed by Gharbi *et al.*, into five types depending on their characteristics: simple cyst, detached membrane, multivesicular, solid heterogeneous and calcified [7]. In this case the splenic hydatid cyst corresponded to type III.

Other techniques such as abdomio-pelvic scan and magnetic resonance imaging are also very useful. Our patient had abdominal and vaginal ultrasonography with abdomio-pelvic scan to confirm the diagnosis.

Surgery is the method of choice. It is of primary importance that the surgeon avoids dissemination of the hydatid disease, as reported by Terec *et al.*, [12]. In patients with multiple cyst localizations, it is recommended to treat as many cysts as possible during the same surgical session [16], which, obviously, necessitates a multidisciplinary concertation meeting. In our case, because of technical difficulties two surgeries were performed at different times.

Medical treatment should be considered an important adjunct to the postoperative therapy [1]. Albendazole has been provided to our patient.

Our study had some issues due to socio-economic problems and patient disponibility. The patient was leaving far from our hospital and couldn't reach us everytime we needed to. Besides, she didn't take her medicine or did the serologic test due to there coast.

Postoperative follow-up is based on clinical examination, abdominal ultrasonography, and serologic tests. Long-term follow-up over many years is recommended. In our case, one year after, physical examination, abdominal and vaginal ultrasonography were satisfying.

CONCLUSION

Hydatid disease may be seen in every age and affects many organs in the body. Therefore, it can pose a major diagnostic dilemma and mimic other entities.

Association between two localizations is very rare. Serology, ultrasonography and computed tomography scans are considered important in investigations.

Surgical treatment is the most effective, accompanied by pre and postoperative medical treatment (albendazole), and the prognosis is generally good.

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