Case Report

Ovarian Echinococcosis in a 4-Year Old Girl

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Abstract

Hydatid disease of the genital organs is very rare with an incidence of 0.2%. This disease has no specific symptoms and findings. It is usually diagnosed intraoperatively. We present a case of a four-year old girl with ovarian echinococcosis, who had earlier been operated on in the Clinic of Pediatric Surgery University Hospital "St. George" Plovdiv, Bulgaria because of intestinal obstruction after laparotomy for liver echinococcosis.

Key words: Ovarium, echinococcus, girl

Introduction

Human hydatid disease is caused by Echinococcus granulosus. Its distribution is world wide and it affects mainly the liver, but other organs could be involved as well. Involvement of the genital organs is very rare with an incidence of 0.2%. In children genitalia echinococcosis is primary[1,2]. The disease has no specific symptoms. More than half of the cases in children are diagnosed during operation. Treatment is usually surgical, according to its localization, but in rare cases with associated echinococcosis medical therapy is preferred.

In this report we present case of a rare localization of a hydatid ovarian cyst in a four-year girl, who has been operated on in the Clinic of Pediatric surgery University Hospital "St. George" Plovdiv, Bulgaria.

Case report

A 4 year-old girl had been hospitalized for the first time in the Clinic of Pediatric Surgery University Hospital "St. George Plovdiv Bulgaria in May 2004 because of multiple lung echinococcoses. The child had a right thoracotomy and echinococcectomy of 5 hydatide cysts was performed. One of the cysts was infected. Two months later, in July the



Fig.1: A total echinococcectomy was performed.

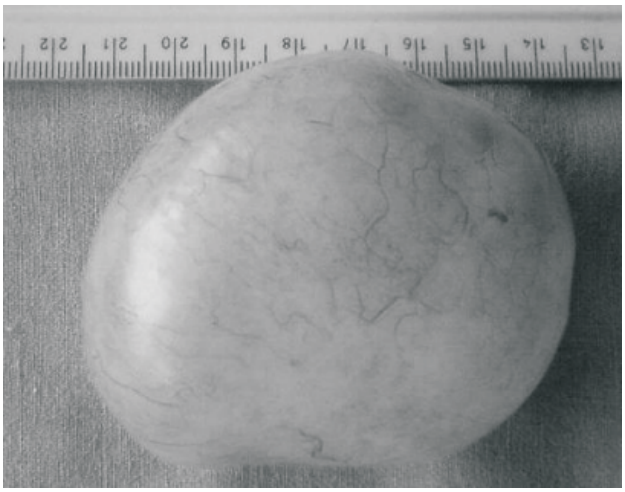


Fig. 2: A cyst with a diameter about 10cm

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child had laparotomy at which seven hydatid cysts were removed from the liver. The patient was treated in the postoperative period with Zentel for about six months. In November 2005 the same child was hospitalized in emergency because of ileus, with vomiting, constipation and abdominal distention. Abdominal X-ray showed features of small bowel obstruction. The child emergency laparotomy and the adhesions were separated. During the laparotomy a cystic mass, filled with clear fluid was found in the right ovary and total echinococcectomy was performed (Fig.1). The cyst was about 10 sm in diameter (Fig.3). The specimen was sent for histopathologic examination. Microscopic findings showed a fibrous capsule surrounding the cyst. The inner layer had a content of white colored chitin and the innermost layer was composed of germinal epithelium (Fig.2). The postoperative diagnosis was confirmed by positive Weinberg and Casoni's tests and also by serological tests. The abdominal cavity was drained. There were no postoperative complications and the child was discharged from hospital ten days after the operation.

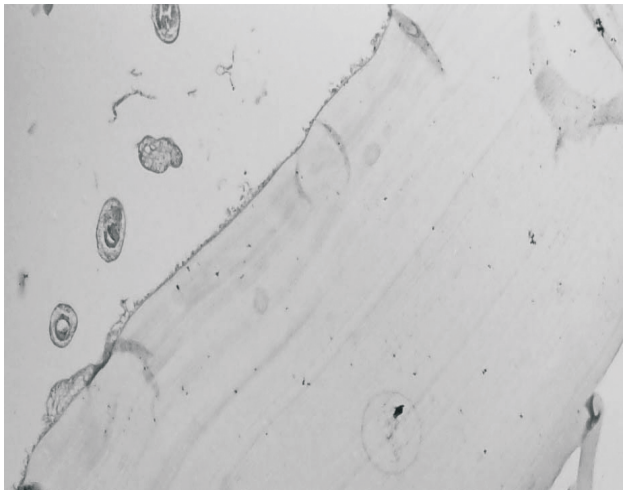


Fig. 3: Hydatine membrane with scollecs H-E x 60

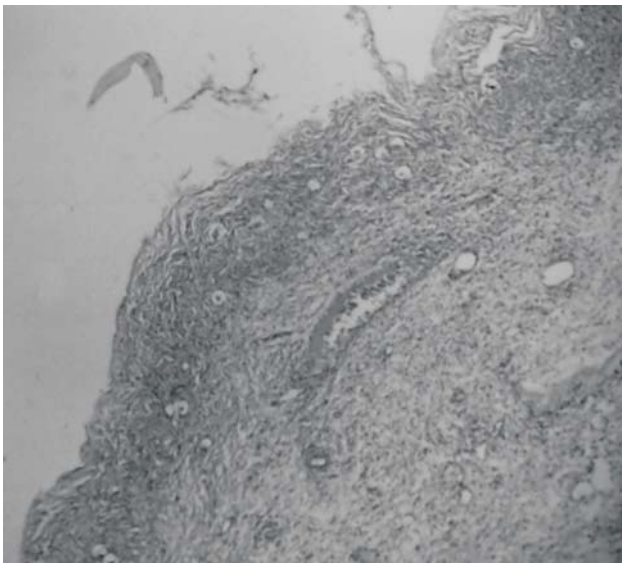


Fig. 4: Ovarian capsule with fibrous hydatine membranes H-E x 60

Discussion

Hydatid can be seen in specific regions of the world[3].Ovarian hydatid disease in children is extremely rare. With the globalization and migration of people this disease has become a general health problem all over the world. The incidence of the disease in the abdominal organs is 6%, while the incidence of genital hydatosis is 0,11%[2,4]. The disease is more common between the ages of 20-40 years[5], but children are not exempted. The interesting thing with the case in this report is its multiorgan localization and rare ovarian presentation as well. There is no a clear explanation for the pathogenesis of the parasitic involvement of the ovaries in children. The parasites pass through the intestines into the portal vein. In this way the parasite can spread in the abdominal cavity in the peritoneum[6]. Genital organs can be secondarily occupied by the parasite. In 1926 Miller states that ovarian Echinococcosis can be primary[4]. In this report, the four-year old girl with ovarian associated echinococcosis has been diagnosed during the surgical intervention, done for intestinal adhesional obstruction. The abdominal pain and abdominal distension were the only symptoms. The ovarian echinococcosis usually resembles an ovarian cyst, except for the lack specific symptoms. Hypogastric pain is a common complaint[5], although in our case this symptom was absent. Previous history of associated echinococcosis should raise a suspicion of secondary echinococcosis and the abdominal exploration should be done cautiously.

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Hydatid cyst of the genital organs can be single or multiple and its size may vary from 1 to 20 cm. In our patient there was a single cyst in the right ovary. Microscopic findings as a rule show a fibrous capsule at the outer layer, white coloured chitin laminar inner layer and an innermost layer of germinal epithelium. (Fig.3, Fig.4).

Surgical intervention and echinococcectomy is the treatment of choice of the disease and mebendazole therapy in the postoperative period is quite effective. One month after the operation normalization of the serological tests was notable.

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