

TRAUMATIC PELVIC HYDATID CYST RUPTURE: REPORT OF A CASE

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Sehsuvar GÖKGÖZ, MD¹, Metin ŞEN, MD¹**ABSTRACT**

Secondary peritoneal echinococcosis is one of the important complications of cyst hydatid disease. Although many ruptured hydatid cysts of a primary organ have been reported, there is only one case of peritoneal hydatid cyst rupture in the literature. In this case report we present a 25 years old male patient, who had been operated for hydatid cyst of the liver four years ago and had pelvic hydatid cyst rupture due to blunt abdominal trauma.

Key words: Peritoneal Hydatid Cyst, Rupture, Recurrence, Trauma

INTRODUCTION

One of the most important complications of hydatid disease is secondary hydatidosis of the peritoneum. Intraperitoneal rupture of hydatid cyst results in dissemination of hydatid fluid, broad capsules, and scolices into the peritoneum, leading to a transient peritoneal irritation of varying severity. The reproductive elements usually initiate the formation of new cysts in the peritoneal cavity.¹ Intraperitoneal cysts may be ruptured spontaneously or traumatically. The ruptured cysts can cause anaphylactic reaction, abdominal pain and implantation of the new cyst material.

Many ruptured hydatid cysts cases of a primary organ have been reported in the literature. However, only one peritoneal hydatid cyst rupture was reported, in which the authors demonstrated spontaneous rupture into the pouch of Douglas.²

We present herein a case of ruptured pelvic hydatid cyst due to blunt abdominal trauma.

CASE

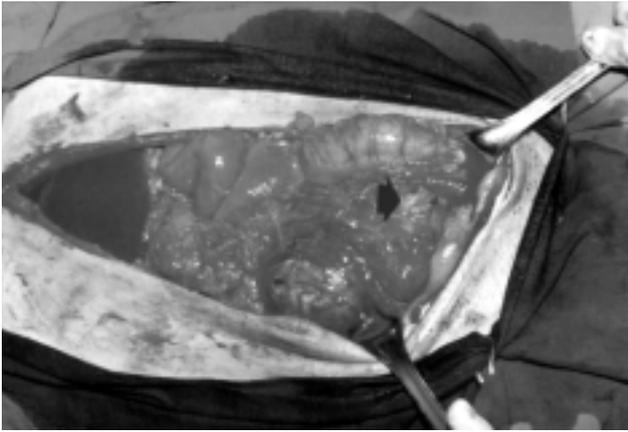
A 25 years old man with lower abdominal pain was admitted to the emergency department. His complaint was started after he had been hit on the lower abdomen by a metal pipe 4 hours before. Abdominal examination revealed tenderness on the lower quadrants, but no guarding. There were no external signs other than an old right subcostal incision scar. He had been operated on for liver hydatid cyst four years ago. His blood white blood cell count was 16.200/mm³. Other hematological and biochemical tests were within normal limits.

Ultrasonography demonstrated two cysts in the liver and multiple cysts in the peritoneal cavity



Picture 1. Ultrasound showing ruptured cyst hydatid and free fluid in the lower abdomen.

especially in pelvic region and free peritoneal fluid (Picture1). These findings suggested an hydatid cyst rupture due to blunt abdominal trauma. Emergency laparotomy was performed. On abdominal exploration free intrabdominal fluid mixed with hydatid cyst material, innumerable cysts on the surface of omentum major, two cysts within the liver (one in was left lobe, and the other was in right lobe) and four large (5-10cm) cysts filling pelvic cavity were detected. One of the pelvic cyst was ruptured through its anterior wall (Picture2). The rupture site was beneath the external trauma point. In operation total omentectomy, partial cystectomy for the liver cysts and resection of all abdominal cysts were performed. Abdominal cavity irrigated with povidone iodine in order to kill viable scolecs.



Picture 2. Operative photograph showing rupture side of the cyst (arrow).

Postoperative period was uneventful and the patient was discharged on seventh day postoperatively. Albendazole was prescribed in order of 10 mg/kg, to prevent recurrence. The patient was followed up with two months intervals during albendazole treatment and he was free of disease at fourth month on his second control visit.

DISCUSSION

Peritoneal echinococcosis is rare and develops most frequently secondary to the rupture or splitting of liver hydatid cysts or, more rarely, spleen cysts. They are usually multiple.^{2,3} Karavias and Prousalidis reported 17 and 25 electively operated peritoneal echnococcosis cases, respectively.^{4,5}

Gunay et al reported 16 cases of ruptured hydatid cysts originating from liver, spleen and lung. Traumatic ruptures were 44% and all were primary cases.⁶

This case is not a common representation of hydatid cyst disease. The cysts in the abdomen developed, after the first operation. They became bigger in size within the peritoneum and pelvic region with time. He had accidental rupture of intraperitoneal cyst, following abdominal trauma.

In this respect, it must be noted that the first operation for the hydatid disease is very important. If all cyst material are not cleaned properly, secondary cyst formation in the liver and peritoneum will be unavoidable.

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Scolicidal solutions injection into the hydatid cyst and packing of the operative field with sponges soaked in scolicidal agents have been used to avoid dissemination of the parasite during surgery. In hydatid liver disease, the risk of dissemination of the cyst contents can be avoided by injection of scolicidal agents such as; cetrimide, hydrogen peroxide, povidone iodine, nitrate de argent, hypersonic saline or praziquantel.⁷⁻⁹ Lavage of the abdominal cavity with scolicidal agent is accepted to be useful but it is not known which agent is more suitable and harmless. Peritoneal absorption of these agents may lead to systemic toxicity. Povidone iodine was recommended as scolocidal agent against peritoneal hydatidosis but cetrimide and hipertonic saline was found to be not effective.^{9,10} We also preferred povidone iodine solution (1%) for lavage of peritoneal cavity.

Intraperitoneal dissemination of the cyst contents may cause severe anaphylactic reaction but the incidence is not as much as once believed.

Computed tomography is currently the most sensitive tool for demonstrating hydatid cyst rupture of liver, and spleen. Ultrasound is also good choice for investigation and assessing the number of hydatid cysts in the abdomen.^{3,6}

In a study, only one recurrence was seen in 11 patients operated for non-ruptured peritoneal hydatid cysts after a mean follow up 38 months.¹¹ But we think that ruptured cases like our patient have more vulnerable for recurrence.

When a peritoneal cyst ruptures into the abdomen, complaints of the patient are not so severe. Mild tenderness is found, but signs of acute abdomen not seen. Therefore, this rare possibility of cyst rupture in a trauma patient, who had been operated before for abdominal hydatid cyst disease should be kept in mind.

In conclusion, traumatic peritoneal cyst rupture is very rare. Great care should be taken to prevent the spillage of hydatid cyst contents during the operation. In cases of intraperitoneal traumatic or spontaneous rupture, all of the cyst contents should be removed. Abdominal cavity should be irrigated with appropriate scolocidal solutions in order to kill all scolex and prevent recurrence. Although it is a very rare entity, this kind of clinical presentation of hydatid cyst disease should be kept in mind.

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