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Traumatic rupture of a splenic cyst hydatid

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ABSTRACT

INTRODUCTION: Hydatid cyst (HC) can be observed in all parts of the body, splenic involvement represents 5% of all cases. Many ruptured HC's cases of a primary organ have been reported in the literature. However, only several splenic HC rupture has reported. A patient with traumatic rupture of splenic hydatic cyst is presented.

PRESENTATION OF CASE: 37 year old female sustained traffic accident presented our emergency department. In her physical examination there was hemodynamic instability, peritoneal irritation sign. An ultrasonographic examination of her abdomen showed intraperitoneal free fluid, a splenic rupture. The patient urgently operated; a 11 × 9 × 5 cm ruptured HC in the spleen was treated by splenectomy. During surgery the intraabdominal spaces were washed with povidoniodine and saline. Postoperative course of the patient was uneventful. The spleen was an organ involved with hydatidosis in our patient. Pathologic examination of the specimen revealed a splenic hydatid cyst. The patient is symptom free for 18 months.

DISCUSSION: Several traumatic ruptured splenic HC case are encountered in the literature. The cases in the literature almost always are not case report but those are one or more than one case in a case series. This case, an extremely infrequent encountered is reporting.

CONCLUSION: Early discovery is important since it is possible to cure viable HCs without dissemination to other organs by conservative surgery. If our patient was examined by ultrasound in a routine check up then her hydatid cyst of spleen would be discovered, the treatment of it would be made so no peritoneal dissemination with cystic fluid will be occur.

1. Introduction

Hydatid cyst can be observed in all parts of the body, splenic involvement represents 5% of all cases.[1] this disease is characterized by cystic lesions. These cystic lesions grow gradually and will make susceptible the viscera involved to trauma. Many ruptured cyst hydatid of a primary organ have been reported in the literature; however, 2 patients with ruptured hydatids of the spleen were reported by Dar et al., one of the patients of Gunay et al.'s was with ruptured splenic hydatidosis. Derici et al.'s series contained a ruptured cyst in the spleen in one patient.[2–4] A patient with traumatic rupture of splenic cyst hydatid is presented.

2. Case

Thirty seven year old female sustained a traffic accident, presented our emergency department. Our patient was sitting in the front seat of car. Two vehicle collided head on. In her physical examination there was hemodynamic instability cause of blood loss, peritoneal irritation sign. An ultrasonographic examination of her abdomen showed intraperitoneal free fluid, a splenic rupture Fig. 1. The patient urgently operated; there was about 1500 ml of free blood in the abdomen, a 11 × 9 × 5 cm of ruptured hydatid cyst in the spleen was treated by splenectomy (Figs. 2 and 3). During surgery the intraabdominal spaces were washed with 10% povidoniodine and saline solution for 15–20 min – the amount of irrigation used was 1 l. Postoperative course of the patient was uneventful. The spleen was only one organ involved with hydatidosis in our patient. The patient is symptom free for 18 months. She received albendazole (400 mg twice daily) for 3 months postoperatively. Anti-pneumococcal vaccine was administered 1 week after surgery.

3. Discussion

The spleen is the third most common organ involved in hydatid disease after the liver (50–75%) and lung (25%).[2] Our series of 97 cases submitted to surgery has four splenic cyst hydatid. Because we did not operate on cyst hydatid of intrathoracic and cardiac location. The spleen (4.12%) (4/97) is the second most common organ involved in our series. Splenic echinococosis represents 3.5–5% of abdominal cyst hydatid treated in various services in the world.

Several traumatic ruptured splenic cyst hydatid case are encountered in the literature.[3,4] The cases in the literature almost

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Fig. 1. Ruptured splenic cyst hydatid; ultrasonographic view.

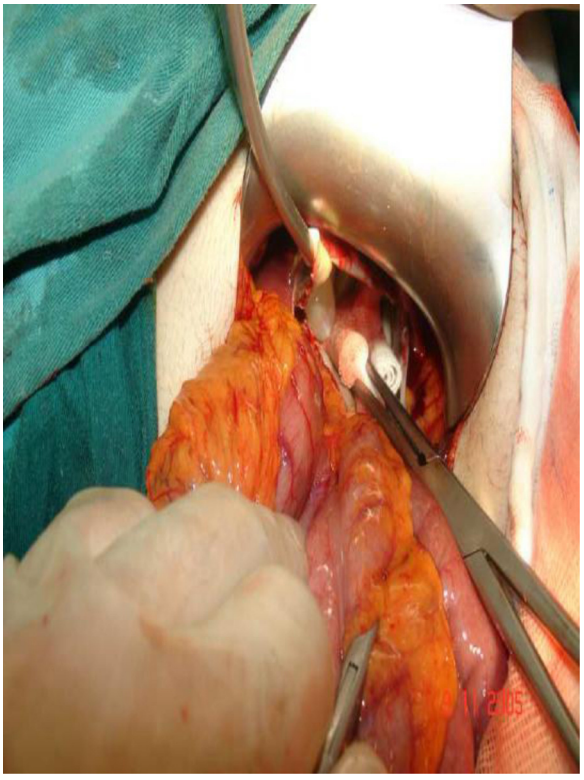

Fig. 2. Intraoperative view of the ruptered splenic hydatid cyst.

always are not case report but those are one or more than one case in a case series. This case, an extremely infrequent encountered is reporting.

Splenic cyst hydatid tends to grow and the spleen will vulnerable to the trauma. At the time of the traffic accident our patient had a rupture of the cyst to the abdominal cavity. Rupture into the peritoneal cavity may cause abdominal pain, nausea, vomiting and urticaria, the most common symptoms, implantation of the cysts into other viscera. All acute abdominal signs such as defense rebound and tenderness are generally present. Urticaria and rash are allergic signs. Anaphylaxis or sudden death has also been reported in patients with ruptured hepatic hydatid cysts.[3,5–8]

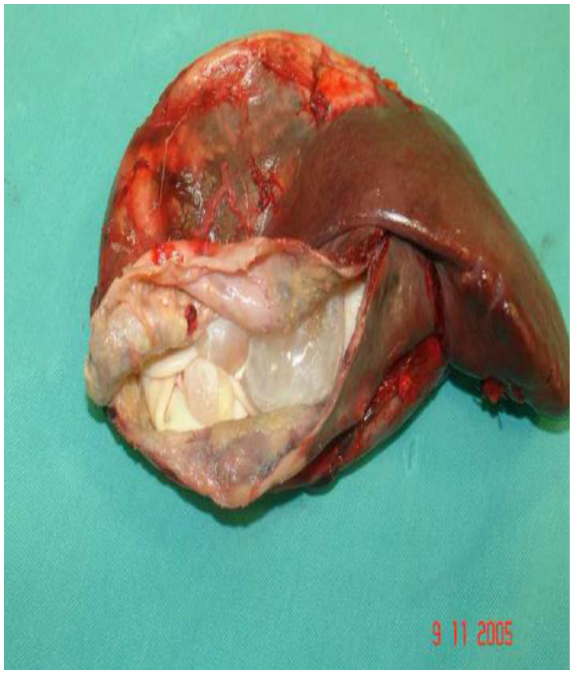

Fig. 3. A gross view of the specimen extracted.

Our patient had no allergic sign and symptom but had acute abdominal signs.

According to Gunay et al. whether peritoneal spillage leads to an higher rate of recurrence compared with confined hydatid lesions is not known their limited follow up data suggests that hydatid cyst rupture is not necessarily associated with increased risk for recurrence.[3] When povidone-iodine is used as a rinsing solution in body cavities, absorption of the whole macromolecular complex is possible. The complex has a molecular weight of about 60,000 and cannot be eliminated by the kidneys or metabolically. It is filtered by the reticuloendothelial system.[10] van Westreenen and co workers showed that All solutions (RPMI medium, NaCl (0.9%), Viaspan (R) and both povidone-iodine (1%) and chlorhexidine (0.02%)) used for abdominal lavage in this rat model induced significantly ($p = 0.0001$) more adhesions (40.6–70.8%). Not all solutions induced an equal effect. The results found in the present in vivo study correlate with observations in previous in vitro experiments i.e. exposure of peritoneal areas to lavage solutions enhances peritoneal activation and thus promotes intra-abdominal adhesion formation.[11] Ozdogan et al. prefer to continue the medical treatment for a few months if the cyst is large and/or complicated or if there is a suspicion of contamination during operation.[9] Our patient also took an anti helmintic medication for a few months. The patient does not have any recurrence sign and symptom in routine follow up. Early discovery is important since it is possible to cure viable cysts of hydatid without dissemination to other organs by conservative surgery.[5] If our patient was examined by ultrasound in a routine check up then her cyst hydatid of spleen would be discovered, the treatment of it would be made so no peritoneal dissemination with cystic fluid will be occur.

In conclusion ruptured hydatid cyst of spleen should be included in the differential diagnosis of traumatic acute abdomen in an endemic area.

Conflict of interest

I disclose no financial and personnel relationships with other people or organisations that could inappropriately influence my work.

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Ethical approval

Approval has not been already obtain any committee.

Author contribution

Study concept or design, data collection, data analysis or interpretation: Ozlem Nuraydin.

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