

Hydatid Cyst of Spleen - A Case Report

Dr. Sujata S. Giriyan¹, Dr. Sindhu Shree .N²

¹Professor and HOD, ²Post Graduate

Department of Pathology, Karnataka Institute of Medical Sciences, Hubballi, Karnataka, India

Abstract: *Hydatid disease is a parasitic infection characterized by cyst formation in any organ, although the liver and lungs are most commonly involved. Splenic hydatid disease is rare, its occurrence even in endemic areas is less than 5% of the total incidence of the echinococcosis. One of the complications of splenic hydatid cysts is cyst rupture either after trauma or spontaneously as a result of increased intracystic pressure. This case report emphasises that hydatid cyst of spleen should be included in the differential diagnosis of traumatic acute abdomen in an endemic area.*

Keywords: Hydatid cyst, Spleen, Trauma, Echinococcosis

1. Introduction

The larval form of the genus *Echinococcus*, of which *Echinococcus granulosus* is the most common, causes hydatid disease. [1] The liver and the lungs are the most common sites of infection. The splenic involvement represents less than 2-5% of all cases of human hydatid disease. [2]

Primary infestation of the spleen usually takes place by the arterial route after the parasite has passed the two filters [Hepatic and Pulmonary].

A retrograde venous route, which bypasses the lung and liver is also reported. [3]

Many ruptured hydatid cyst's cases of a primary organ have been reported in the literature. However, only few splenic hydatid cyst rupture are reported. [4] Here we report a rare case of primary splenic hydatid cyst which was an incidental finding after blunt trauma abdomen in a 19 yr old male.

2. Case Report

A 19 years old male presented to the emergency department with history of self fall and sustained injury to pelvis and back. There were no complaints of head injury. General physical examination was normal except for the presence of tenderness over right groin and an abrasion of size 7×3 cm over right lower back. X-ray revealed right superior and inferior pubic rami fracture.

Systemic examination was normal initially but later abdomen was found uniformly distended with tenderness and restricted movements with respiration. Blood was aspirated on paracentesis. USG abdomen showed hemoperitoneum for which exploratory laparotomy with peritoneal wash was done under GA. Intraoperative findings revealed hemoperitoneum of about 100 ml, ruptured cyst wall contents found lying freely within the peritoneal cavity and near splenic hilum and a splenic cavity of size 4×4 cm. Liver appeared normal intraoperatively.

Specimen of cyst wall contents was sent to pathology department for HPE.

3. Gross

Cyst wall consisted of multiple grey yellow membranous tissue, largest measuring 15×12×2 cms. Surface was smooth, glistening with areas of congestion. At some places grey- brown firm areas were seen.



Figure 1: Gross specimen of ruptured cyst wall showing multiple grey yellow membranous tissue

Microscopy: Section studied from cyst wall showed eosinophilic laminated cuticle long with brood capsules, scolex, cholesterol clefts and mixed inflammatory cell infiltrate consisting of neutrophils and lymphocytes. At places, coagulative type of necrosis and hemorrhage were seen.

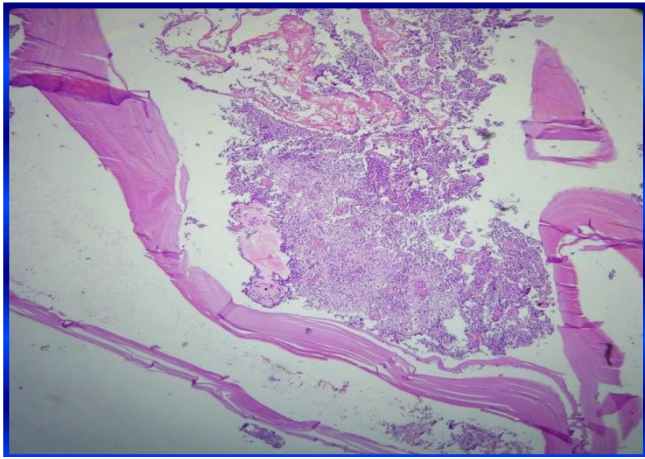


Figure 2: Microscopy showing outer acellular laminated membrane with inflammatory infiltrate.(H&E 4x10)

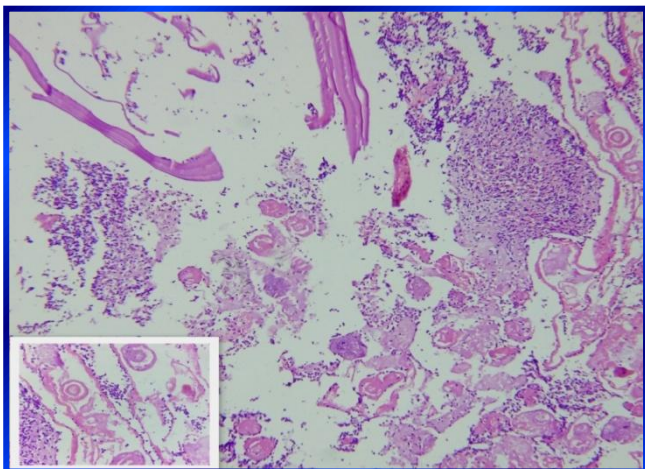


Figure 3 Microscopy showing scattered scolices with laminated membrane and mixed inflammatory infiltrate.(H&E 10X10)

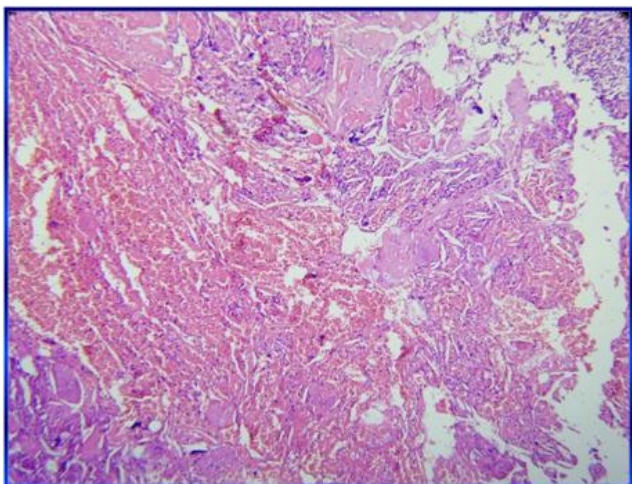


Figure 4: Microscopy showing hemorrhage with coagulative necrosis and cholesterol clefts.(H& E 10X10)

4. Discussion

Hydatid disease is common in areas where sheep and cattle rearing are important, particularly in Tunisia. It is a zoonotic infection caused by the tapeworm of the genus *Echinococcus*. The most common form is cystic hydatid disease that is caused by *Echinococcus granulosus*,

whereas the alveolar type is caused by *E. multilocularis*.^[5] The primary hosts are the members of the Canidae family; usually dogs, wolves and coyotes. The intermediate hosts are the sheep, cattle and deer. Humans enter the cycle through infected canine faeces.^[2] Primary infestation of the spleen usually takes place by the arterial route after the parasite has passed the two filters (hepatic and pulmonary). A retrograde venous route through portal circulation which bypasses the lung and liver is also reported. Secondary splenic hydatid disease usually follows systemic dissemination or intraperitoneal spread following ruptured hepatic hydatid cyst.^[6]

Splenic hydatid cysts are uncommon and are often asymptomatic as seen in this case. However, it may present as a painful mass in the left upper abdominal quadrant or enlarged spleen with fever.^[1] The complications of untreated splenic hydatid cyst are mainly secondary infection, inflammation, anaphylactic shock, intraabdominal rupture of cyst, acute abdomen, and compression of other viscera or fistulisation to the bowel, mainly colon.^[6] The main problem in the diagnosis of splenic hydatosis is in differentiating it from other splenic cystic lesions that have similar appearances on sonography and computed tomography. The differential diagnosis of such lesions includes epidermoid cyst, pseudocyst, large solitary abscess or hematoma, intrasplenic pancreatic pseudocyst and cystic neoplasms of the spleen.^[6]

The diagnosis of splenic hydatid cyst is based on historical and geographic backgrounds, physical examination, radiological tools, serology, fine needle aspiration cytology, and histopathological examinations of resected cysts. Serological tests are used for diagnosis, screening, and follow-up for recurrence.^[7] Several traumatic ruptured splenic cyst hydatid 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.^[4] This case, an extremely infrequent encountered is reporting. Splenic hydatid cyst tends to grow and the spleen will be vulnerable to trauma.^[4]

Until recently, the gold standard treatment for splenic hydatidosis was splenectomy. Medical therapy seems to be ineffective. However, the last two decades have shown a tendency towards splenic conservative surgery in suitable cases to reduce opportunistic post-splenectomy infection.^[2]

5. Conclusion

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

References

- [1] Col Hariqbal Singh, Maj Sumeet Arora. Primary Hydatid Cyst of the Spleen. *MJAFI* 2003; 59: 169-170.
- [2] DV Patnavadia, YA Kruwala, S Lakhani, V Date, J Lakhani. Hyadtid cyst in the spleen: a rare presentation. *Indian Journal of Medical Microbiology* 2011; 29(2) : 192-193.

- [3] Bhaskaran A, Kalyani R, Jyotindra Singh, Praveen.V, Anantha Raju G.S. A Rare Malignant Hydatid Cyst of Spleen. J Clin Biomed Sci 2011; 1(1) : 20-24.
- [4] Nuraydin Ozlem. Traumatic rupture of a splenic cyst hydatid. Int J Surg Case Rep. 2015; 7:112-114.
- [5] C. Loussaïef, H. Ben Brahim, W. Ben Abdessalem, A. Toumi, A. Aouam and M. Chakroun. Primary Hydatid Cyst of the Spleen: Unusual Location International Journal of Case Reports in Medicine. Vol. 2013 (2013).

- [6] Shweta Rana, Shivani Kalhan, Sonia Hasija, Manmeet Kaur Gill1 and Neha Garg Jain. Primary Hydatid Cyst of Spleen: A rare entity. International Journal of Biomedical and Advance Research 2014; 05(08).
- [7] Sedat Belli², Sami Akbulut¹, Gurcan Erbay³, Nazım Emrah Kocer. Spontaneous giant splenic hydatid cyst rupture causing fatal anaphylactic shock: A case report and brief literature review. Turk J Gastroenterol 2014; 25: 88-91