



LAPAROSCOPIC SURGERY IN A CASE OF LARGE LIVER HYDATID CYST

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ABSTRACT Hydatid disease is a zoonotic disease that occurs throughout the world. It is caused by larva of the dog tapeworm, *Echinococcus granulosus*. Liver is the most commonly involved organ in adults. Hydatid cyst of liver can be managed by medical, PAIR, endoscopic, laparoscopic and open surgical techniques. Indications of operative treatment are large liver cyst with multiple daughter cyst, superficially located single liver cyst that may rupture, liver cyst with biliary communications or pressure effects on vital organs and infected cysts. We report a case of giant hydatid cyst of liver which was successfully managed by laparoscopic approach without intraoperative complications.

KEYWORDS : hydatid cyst, laparoscopy, liver cyst

INTRODUCTION

Liver hydatid disease is a zoonosis caused by larva of the dog tapeworm, *Echinococcus granulosus*, with man acting as an accidental intermediate host [2]. Hydatid cyst of liver can be managed by medical, PAIR, endoscopic, laparoscopic and open surgical techniques. Indications of operative treatment are large liver cyst with multiple daughter cyst, superficially located single liver cyst that may rupture, liver cyst with biliary communications or pressure effects on vital organs and infected cysts [2]. We successfully managed a case of large hydatid cyst of liver by laparoscopic technique without any intraoperative complications.

Clinical Presentation

A sixty year old women presented to our surgical OPD with dull aching pain in the upper abdomen for a year. There was no history of vomiting, fever, jaundice. No other significant past, family or drug history. No history of pets at home.

General physical examination was unremarkable. On per abdomen examination, a vague palpable and non-tender lump was noted in the epigastric region. Informed consent for investigations was taken from the patient. Routine blood investigation were normal. Ultrasonography of abdomen revealed a large cystic lesion in the left lobe of liver. CECT scan of abdomen showed a huge cyst measuring 10x8cm in the left lobe of liver with calcified cyst wall[Fig a]. Radiological features were highly suggestive of a hydatid cyst of liver.

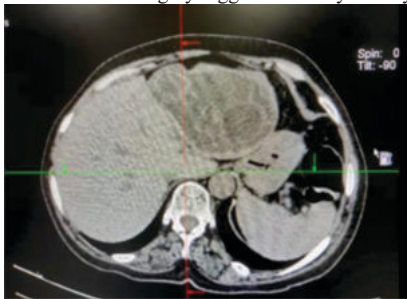


Fig a- CT Image Showing Hydatid Cyst

Management

Informed consent for surgery was taken from the patient. Albendazole was given for a period of 3 months and patient was subjected for surgery. Patient was placed in semi lithotomy position with surgeon standing in-between the legs and the camera assistant to the right of the patient. Four ports were used, the camera port one inch above the umbilicus in the midline and two 5mm working ports in the midclavicular line an inch below the coastal margin and one port in the epigastrium right of midline. After the initial diagnostic laparoscopy a roller gauze soaked in 10%betadine was introduced and placed all around the cyst as a precaution in case of spill. Laparoscopic needle was introduced in the cyst and hypertonic saline was injected in the

cyst and kept for 10 minutes[Fig b]. This was followed by aspiration and reinjection of hypertonic saline for ten times. Betadine can also be injected in the cyst. It was not done in this case as betadine stains the inner layer of cyst and identification of the biliary leak becomes difficult. The cyst wall was excised[Fig c] as much as possible and the cavity was packed with omentum[Fig d] by putting sutures on to the edge of the liver. A drain was placed near the cavity as minor leaks are always seen postoperatively which close spontaneously.



Fig b- Injection of Hypertonic Saline into Cyst

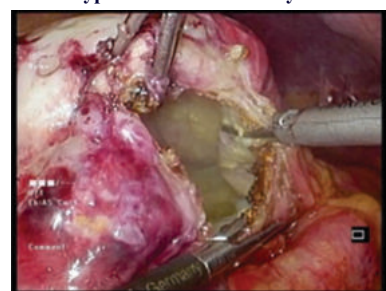


Fig c- Excision of Cyst Wall

DISCUSSION

Worldwide occurrence of hydatid disease, is common. The liver is typically impacted in adults. Large cysts have a higher risk of problems and are the cause of pressure symptoms in the affected organs. A huge cyst is defined as one with a diameter more than 5 cm. Three layers make up a hydatid cyst: the adventitia, laminated membrane, and germinal layer [1].

Large hepatic hydatid cysts are more likely to rupture into the peritoneum and pleural cavity, which can result in serious allergic reactions from fluid leakage, cholangitis from intrabiliary rupture, erosion and rupture into the pericardial space, and widespread illness [1][2].

Medical care can be used to treat small, asymptomatic hepatic hydatid

cysts, but symptomatic and larger cysts need surgery. Laparoscopic surgical procedures for hepatic hydatid cysts have been available for some time now, and as laparoscopic technology has advanced, so has the acceptance of these procedures. The goals of treating hydatid cysts are the same for both laparoscopic and open procedures: to remove scolices by emptying the cyst without spilling its contents, to sterilize the cavity with scolicidal drugs, to look for any biliary communication, and to manage any residual cavity [3]. Laparoscopy has several advantages over open surgery, including smaller incisions, a shorter hospital stay, quicker recovery, less invasion, and easier access to numerous and uncommon cyst locations [4]. The primary potential risk of laparoscopy is intraperitoneal spillage during surgery, which can occur as a result of ineffective suction device control and technological malfunctions. In addition, inability to clear all daughter cysts can result in recurrence [3]. The management plan for each case should be individualized.

CONCLUSION

Laparoscopic surgery is feasible in hydatid cyst of the liver. Adequate preoperative medical treatment with albendazole, all precautions to sterilize the cyst cavity and avoid spill of the cyst contents inside the peritoneal cavity have to be ensured.

Acknowledgments

None

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