Laparoscopic Management of Hepatic Hydatid Disease, What Makes it Safe and Effective?

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Abstract

Background: The treatment should be individualized to the morphology, size, number and location of the cysts, that is why a variety of surgical operations have been advocated from complete resection like total pericystectomy or partial hepatectomy to laparoscopy to a minimally invasive procedures like percutaneous aspiration of cysts to conservative drug therapy.

Aim: To determine factors that increases the effectiveness and safety of laparoscopic surgery for the management of hepatic hydatid cyst.

Materials and Methods: This is a case series study carried out at the Department of surgery at Aljamhori Teaching Hospital in Mosul, during the period from June - 1- 2009, to June – 1- 2012. Participants were 48 patients who met the present study criteria for laparoscopic surgery; they were selected from 80 patients with hydatid cyst of the liver. Before any procedure patients' written consents were taken. The diagnosis was settled by ultrasonic evaluation and CT scan, the exclusion criteria was as follows: Deep intra-parenchimal cysts, posteriorly situated cyst (segment 7), More than 2 cysts, cysts with calcified wall, other intra abdominal organ involvement by hydatid cyst, recurrent hydatid cyst in the liver, previous upper abdominal surgery and patient refusal. Exposure of the cyst was done by a 30° telescope inserted through the umbilical trocar, a 10-mm trocar was inserted from a point as close as possible to the cyst where a high negative pressure suction tube introduced. The cyst was punctured with a 14-gauge 6F aspiration needle surmounted by second suction device inserted through 5 mm trocar. One hundred mg Hydrocortisone was given to the patient at time of aspiration, the 10mm canulla was introduced inside the cavity were the germinal layers sucked completely. At time of penetration and during suction, the flow rate of CO₂ increased to maximum L/M and the intra abdominal pressure decreased to 12 mmgh. Intracystic visualization was performed by the camera, the cavity was washed by isotonic saline; omentoplasty was done after deroofing of the cyst, tube drain at the vicinity of the cyst was put.

Results: There were 29 male and 19 female patients, their age varied from 14 to 58 years. The study included 42 patients with solitary cyst and 6 patients with 2 cysts in their liver. The size of the cysts according to ultrasonic measures was varied from 6 to 12cm, 34 cysts were in the right lobe and 20 cysts were in left lobe. The mean operative time was 52 minutes. There was no intra operative complication. All patients had uneventful recovery from anesthesia. Cavity infection occurred in 1 patient, bile leakage was observed in 2 patients. The mean length of hospital stay was 2 days. No reported recurrences in any patients during 12 months follow up period. No conversion was needed, no mortality was recorded.

Conclusions: Laparoscopic surgery for hepatic hydatid cyst is a safe and effective method when there is selection, with the use of special maneuvers to decrease spillage and recurrence. Further studies are encouraged in this field because there is no universally accepted standard technique.

Key Words: liver, hydatid cyst, laparoscopy