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ORIGINAL RESEARCH

Laparoscopic approach for the management of hydatid cysts of liver

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ABSTRACT

Background: Human hydatid illness is caused by the cestode Echinococcus granulosus, which frequently lodges in the liver. Although there are a number of endemic areas, the illness can be found anywhere in the world. Surgery is the major mode of treatment, despite developments in medicinal and minimally invasive radiological therapies. The present study was laparoscopic approach for the management of hydatid cysts of liver. **Materials & Methods:** 56 cases of hydatid cysts of liver of both genders were managed with laproscopic hydatid cystectomy. Parameters such as location of cyst, diameter of cyst, operation time, hospital stay, and recurrence rare was noted. **Results:** Out of 56 cases, 32 were males and 26 were females. Location of cyst was right lobe in 36 and left lobe in 20 cases. Diameter was 5-10 cm in 13 and 11-15 cm in 28 and 16-20 cm in 15 patients. The mean operation time was 45-60 mins in 14, 60-90 mins in 37 and 90-120 mins in 5 cases. The mean hospital stay was 2-4 days in 11 and 4-8 days in 45 cases. The difference was significant ($P< 0.05$). However no recurrence was found. **Conclusion:** In cases of hepatic hydatid illness, laparoscopy is quite viable. Effective dissection and partial cystectomy are made possible by the use of laparoscopic cutting and sealing tools. Laparoscopic surgery for liver hydatid illness is not limited by the size or grade of the cyst.

Keywords: Human hydatid, hydatid cystectomy, liver

INTRODUCTION

Human hydatid illness is caused by the cestode Echinococcus granulosus, which frequently lodges in the liver. Although there are a number of endemic areas, the illness can be found anywhere in the world.[1] Surgery is the major mode of treatment, despite developments in medicinal and minimally invasive radiological therapies.[2] Laparoscopic surgery has emerged as a topic of discussion in the past ten years, and numerous studies have shown promising outcomes. Surgeons should concentrate on safely removing and sterilizing the cyst's cavity regardless of the method they use.[3]

Laparoscopic treatment for hepatic hydatid disease has been practiced in numerous centers since the 1990s.[4] The general strategy is comparable to open surgery. Sterilization of the cyst cavity, cautious removal of the cyst's contents without intraperitoneal spread, examination of the biliary rupture, and obliteration of the cyst's cavity are the fundamentals of surgery, regardless of the technique.[5] Carefully choosing patients is the best way to achieve these goals in laparoscopic hydatid disease surgery. The majority of laparoscopic surgeons currently favor straightforward drainage techniques, either with or without partial cystectomies.[6] The present study was laparoscopic approach for the management of hydatid cysts of liver.

MATERIALS & METHODS

The study was carried out on 56 cases of hydatid cysts of liver of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Surgery was planned by laproscopic hydatid cystectomy for the cyst which are identified laparoscopically. Parameters such as location of cyst, diameter of cyst, operation time, hospital stay, and recurrence rate was noted. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

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RESULTS

Total- 56		
Gender	**Male**	**Female**
Number	32	26

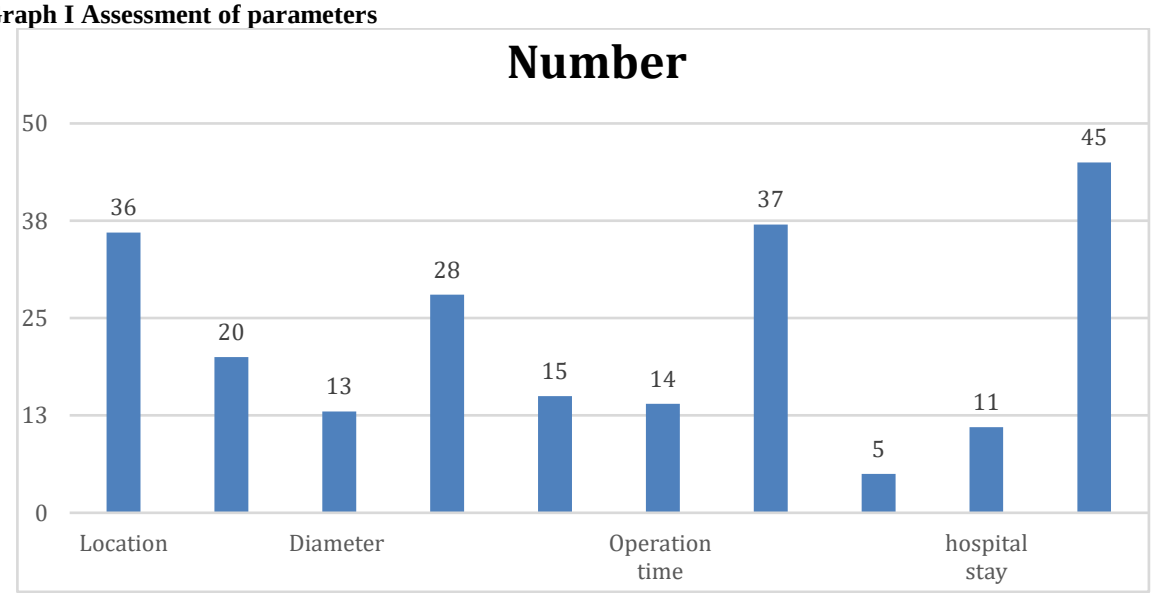
Table I shows that out of 56 cases, 32 were males and 26 were females.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Location	Right lobe	36	0.05
	Left lobe	20	
Diameter	5-10 cm	13	0.73
	11-15 cm	28	
	16-20 cm	15	
Operation time	45-60 mins	14	0.05
	60-90 mins	37	
	90-120 mins	5	
hospital stay	2-4 days	11	0.01
	4-8 days	45	

Table II, graph I shows that location of cyst was right lobe in 36 and left lobe in 20 cases. Diameter was 5-10 cm in 13 and 11-15 cm in 28 and 16-20 cm in 15 patients. The mean operation time was 45-60 mins in 14, 60-90 mins in 37 and 90-120 mins in 5 cases. The mean hospital stay was 2-4 days in 11 and 4-8 days in 45 cases. The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

Although treatment choices for hydatid disease of the liver have increased in the last 2 decades, including medical treatment, percutaneous drainage, or a combination, surgery remains the mainstay of therapy.[7] Use of these other modalities is restricted to certain stages of the disease and is associated with inconsistent results. Total pericystectomy seems to be the best operative procedure for small and peripherally located cysts.[8] It has been demonstrated that pericysts contain no scolices. For large and deeply located cysts, the more extensive cystectomy and hepatectomy are accompanied by higher morbidity.[9] The present study was laparoscopic approach for the management of hydatid cysts of liver.

We found that out of 56 cases, 32 were males and 26 were females. Location of cyst was right lobe in 36 and left lobe in 20 cases. Diameter was 5-10 cm in 13 and 11-15 cm in 28 and 16-20 cm in 15 patients. Yavuz R et al[10] investigated the characteristics and outcome of patients with hydatid disease of the liver who were laparoscopically managed. In all patients, laparoscopic cystotomy, unroofing with laparoscopic cutting and sealing instruments for surgical dissection and omentoplasty were performed. No conversion to laparotomy was necessary. No radiological recurrence was observed in a mean follow-up of 11 months (range: 3-18 months).

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4-8 days in 45 cases. Altinli et al[11] examined the traits and results of liver hydatid disease patients treated laparoscopically. Thirteen patients with hepatic hydatid disease, ages 36 on average (range: 23 to 63), were evaluated for laparoscopic surgery in our department between January 1998 and November 2000. Laparoscopic surgery was performed on each patient. All patients underwent omentoplasty with helical fasteners, unroofing, and laparoscopic cystotomy, which were initially intended for endoscopic hernia repair treatments. There was no need for a laparotomy conversion. Bile leakage was seen in one case, which had a solitary cyst in the right lobe. On average, no radiological recurrence was found.

Ertem et al[12] studied case series of patients with hepatic hydatid disease who underwent laparoscopic treatment within 7 years. Forty-eight patients with hydatid disease who met criteria for laparoscopic surgery and were aged 17 years or older were selected. Cystotomy and partial cystectomy with drainage were performed in 33 patients. Omentoplasty was simultaneously performed in 15 patients to obliterate the cystic cavity. Main outcome measures were **c**linicopathologic features, morbidity, mortality, operative time, length of hospital stay, conversion to laparotomy, and recurrences were reviewed retrospectively. The mean operative time was 82 minutes (range, 45-170 minutes). The conversion rate to open surgery was 4%. The mean postoperative length of hospital stay was 4.2 days. Morbidity was 6% (3 patients). There was no mortality. The mean follow-up was 34.2 months. No recurrences were observed during this period. Laparoscopic hepatic hydatid surgery was a safe and effective method in selected patients.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that in cases of hepatic hydatid illness, laparoscopy is quite viable. Effective dissection and partial cystectomy are made possible by the use of laparoscopic cutting and sealing tools. Laparoscopic surgery for liver hydatic illness is not limited by the size or grade of the cyst.

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