

## Surgical Treatment for Liver Cyst

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**ABSTRACT:** We assess surgical treatment for seven patients with hepatic cyst on the basis of our clinical experience. It is emphasized to infer that surgical treatment is necessary for carcinoma arising from a cyst or suspicious one. It is also recommended that incidentally detected cysts should be treated with ethanol infusion under direct vision, if necessary, by using echoguided method. The operation method of deroofting except for complete resection is not necessarily guaranteed for large sized cysts.

### INTRODUCTION

Recently the cystic lesion of the liver has become more commonly detected by prevalence of echography and CT scan. However, it used to be asymptomatic and it is very rare to be surgically treated. The aim of this study is to review the validity of the surgical treatment for cystic lesions of the liver on the basis of our

surgical experience.

### PATIENTS

Seven patients who underwent surgical treatment for liver cysts were eligible for this study. One men and 6 women, ages ranging from 30 to 73 years as shown in **Table 1**. Four out of seven had symptoms such as pain in 3 and pyloric stenosis in one. On the contrary

**Table 1.** Patients with liver cyst

case	symptom	location	number	size	Op. Method	Op. indication
65 yrs Female	r-hypochondralgia	r-lobe	1	15×14	cystectomy	rupture
69 Female	r-hypochondralgia	both	4	4×6	deroofting (ethanol)	compression
69 Female	none	both	multiple	8.5×7 1~3	hepatectomy	rupture
73 Female	epigastralgia	r-lobe	1	13×11	deroofting (Laser)	compression
29 Female	r-hypochondralgia	l-lobe	1	16×10	deroofting	compression
30 Female	chest-back pain	l-lobe	multiple	8	hepatectomy	cancer(susp)
52 Male	nausea	retroperit	multiple	18×11	hepatectomy (gastrectomy)	cancer(susp)
60 Female	none	r-lobe	1	6×7	deroofting (low anterior R)	rupture

the other 2 patients were asymptomatic and these were incidentally detected at laparotomy for other diseases (carcinoma of the sigmoid colon, gastric cancer). The locations of the cysts were the right lobe in 3, the left lobe in 2 and both lobes in 2.

The numbers of the cysts were solitary in 3 and multiple in 3. The cysts ranged from 4cm to 18cm in size. The operative methods were deroofting in 3, including combined therapy with 95% ethanol injection in one, cystectomy in 1 and hepatectomy in 3.

The aims of surgery for hepatic cysts were to prevent the cyst from rupture in 3, to relieve of compression symptoms in 2 and to eradicate suspicious carcinoma associated with hepatic cysts or unable to neglect it.

The surgical outcome was satisfactory in all the patients. However, in the two patients who underwent preceded surgical treatment of deroofting, the second procedure composed of ultrasound-guided 95% ethanol injection and hepatectomy respectively. In addition, one patient underwent deroofting combined with 95% ethanol injection simultaneously for the purpose of fixation of the posterior wall of the cyst.

## DISCUSSION

It is common that hepatic cyst has the asymptomatic clinical course without any medical care. However, some take a clinical course of spontaneous regression<sup>1)2)</sup>, some increase the sizes of hepatic cysts, producing compression symptoms of abdominal fullness which requires medical treatment.

According to our clinical experience with the treatment of hepatic cyst, compression symptoms of epigastralgia were seen in the size ranging from 4×6cm to 13×11cm. It seems that compression syndroms produced by cysts were not only due to the size of cysts but due to the location. In view of a risk of occurring rupture, cases of considerable large cysts with thin wall must be watched.

When the finding of an abdominal mass in the cyst is detected on CT scan and/or echosonogram, one must take it into consideration that it is suggestive of a presence of carcinoma associated with cysts. It is accepted

that the surgical approaches of hepatic cysts include internal fistula formation between the cyst and the gut, cystectomy, deroofting, fenestration and so on. Recently a new approach of pure alcohol injection for hepatic cyst has been introduced by Bean<sup>3)</sup> in 1981.

As for the adequate dosis it is reported by Bean<sup>3)</sup> that alcohol injection of more than 12 percent of fluid volume aspirated is suitable. It is common that 10 to 50 per cent of aspirated volume is clinically used as the dosis of injection. Idogawa<sup>4)</sup> reported that repeated alcohol injection into cysts, through a small sized catheter introduced into cysts, is necessary as a treatment of giant cysts. In this series, we used a small amount of ethanol after complete aspiration of cystic content under direct vision.

Furthermore, ethanol injection therapy was used in one as ajuvant treatment of deroofting of the operative procedure.

We herein would like to emphasize that hepatic cysts which are incidentally detected at laparotomy should be managed under direct vision by using ethanol injection method which is easily feasible and guaranteed with satisfactory results.

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