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Optimal surgical treatment for T2 gallbladder carcinoma: Strategies and outcomes

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Purpose

While extended cholecystectomy is recommended for T2 gallbladder carcinoma (GBC), the role of laparoscopic treatment and hepatic resection for T2 GBC is unclear. The purpose of this study was to assess the role of laparoscopic treatment compared to open surgery and to identify the necessity of hepatic resection in patients with T2 GBC.

Methods

The data of 92 patients with histopathologically proven T2 GBC who underwent surgical resection between January 1999 and December 2017 were retrieved from a retrospective database. Eligible patients were classified into the laparoscopic and the open surgery groups according to the type of surgery they underwent. Propensity score matching between the two groups was used at a 1:1 ratio. The effect of type of surgical approach on oncologic outcomes was investigated. To identify the optimal surgical management, T2 GBC was classified into hepatic side and peritoneal side. The recurrence pattern and the role of hepatic resection for T2 GBC were investigated.

Results

Before propensity score matching, 37 and 44 patients were included in the laparoscopic treatment group and the open surgery group, respectively. Following propensity score matching, 19 patients each were included in the two groups. The operative time (218.9 ± 145.0 vs. 316.8 ± 80.1 , $P=0.014$) and postoperative hospital stay (8.4 ± 5.9 vs. 14.4 ± 6.0 , $P=0.004$) were significantly shorter in the laparoscopic treatment group than that in the open surgery group. The median follow-up was shorter in the laparoscopic group than the open surgery group (26 vs 70 months). The 3-year overall survival rates (88.9% vs. 86.3%, $P=0.660$) and the 3-year disease free survival rates (60.2% vs. 76.4%, $P=0.448$) were

similar in the two groups. Patients with hepatic side GBC had worse survival than those with peritoneal side GBC (76.0% vs. 96.6%, $P=0.041$). Hepatic resection had no treatment effect in the patients with T2 GBC ($P=0.272$). Multivariate analysis showed that lymph node metastasis was the only significant prognostic factor ($P=0.002$).

Conclusions

Laparoscopic surgery can be the standard treatment for T2 GBC as it yields similar oncologic outcomes with those of the open surgical method. Meanwhile, hepatic resection is not essential for curative treatment in T2 GBC, and more systemic treatments are needed for GBC, particularly those with T2b GBC.