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Prognostic role of liver resection in extended cholecystectomy for T2 gallbladder cancer revisited: A propensity score-matched analysis

Yeshong PARK¹, Yoo-Seok YOON^{*1}, Jun Suh LEE¹, Boram LEE¹, Hee Ju SOHN², Hongbeom KIM², Wooil KWON², Chang-Sup LIM³, Jin-Young JANG², Ho-Seong HAN¹

¹Department of Surgery, Seoul National University Bundang Hospital, Republic of Korea

²Department of Surgery, Seoul National University Hospital, Republic of Korea

³Department of Surgery, Seoul National University Boramae Medical Center, Republic of Korea

Background : Gallbladder cancer (GBC) is an aggressive disease, and radical surgery is the only potentially curative treatment. Yet the optimal surgical extent in extended cholecystectomy remains controversial. This study aims to evaluate the role of liver resection in T2 GBC.

Methods : Patients who underwent extended cholecystectomy for T2 GBC between January 2010 and December 2020 at three tertiary referral hospitals were analyzed. Extended cholecystectomy was defined as either lymph node dissection with liver resection (LND+L group) or lymph node dissection only (LND group). We conducted 2:1 propensity score matching to compare the survival outcomes between the groups.

Results : Of the 197 patients enrolled, 100 patients from the LND+L group and 50 patients from the LND group were successfully matched. The LND+L group was associated with more estimated blood loss ($P < 0.001$) and longer postoperative hospital stay ($P = 0.047$). There was no significant difference in 5-year disease-free survival (DFS) between the two groups (82.7% vs. 77.9%, $P = 0.376$). Subgroup analysis showed that 5-year DFS was similar between the two groups in both T substages (T2a: 77.8% vs. 81.8%, $P = 0.988$; T2b: 88.1% vs. 71.5%, $P = 0.196$). In multivariable analysis, lymph node metastasis (hazard ratio (HR) 4.80, $P = 0.006$) and perineural invasion (HR 2.61, $P = 0.047$) were independent risk factors for DFS; liver resection was not a prognostic factor (HR 0.68, $P = 0.381$).

Conclusions : In selected early GBC patients, extended cholecystectomy including lymph node dissection without liver resection could be a reasonable treatment option.

Corresponding Author : **Yoo-Seok YOON** (yoonyes@snubh.org)