

KAHBPS 1

Impact of longitudinal tumor location on postoperative outcome in gallbladder cancer: Fundus and body vs. neck and cystic duct, a retrospective multicenter study

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Lecture : In the pilot study for longitudinal location of gallbladder cancer (GBC) at Dankook University Hospital, proximal GBC (neck and cystic duct, NC-GBC) had worse prognosis than the distal GBC (fundus and body, FB-GBC). However, this study included only a small number of patients and there were no domestic data available in Korea, we planned a multicenter study to evaluate the impact of longitudinal tumor location on oncologic outcomes of GBC.

From January 2010 to December 2019, patients who underwent surgery with curative intent at seven hospitals of Daejeon-Chungcheong branch of KAHBPS were reviewed. Enrolled cases were divided into FB-GBC and NC-GBC groups according to longitudinal tumor location, and oncologic outcomes were compared.

In analysis of patients with all stages (n = 374), NC-GBC (n = 91) group had more advanced T, N stages, histologic grade, and more frequent lympho-vascular invasion, perineural invasion than FB-GBC group (n = 283). After excluding T1 patients (n = 100), results (T2~4 stage) were similar to those of all stages. For patients in NC-GBC group with T2~4 stage cancer, lower 5-year overall survival rate (OS, 60.7% Vs. 31.8%, p = < 0.001), lower 5-year disease-free survival rate (DFS, 61.6% Vs. 24.7%, p = < 0.001), and higher recurrence rate (31.5% Vs. 60.8%, p = < 0.001) were identified. To adjust for two strongly related covariates, namely T and N stages, only stage II patients (n = 138) were analyzed. There was no significant difference in the clinical characteristics of both groups except for the frequency of bile duct resection (7.3% Vs. 21.4%, p = 0.038). Although the recurrence rate did not differ in two groups, 5-year OS (66.7% Vs. 29.9%, p = 0.009) and DFS (72.1% Vs. 49.9%, p = 0.033) were significantly lower in NC-GBC group. The GBC location was not a significant factor related to survival in multivariate analysis of patients with all stages. However, NC-GBC (HR 2.69; 95% CI 1.27-5.70, p = 0.010 in OS and HR 2.69; 95% CI 1.21-5.96, p = 0.015 in DFS) and elevated preoperative CA19-9 (both p < 0.001) were independent factors for OS and DFS in stage II patients.

This study showed that the NC-GBC had more aggressive features and worse prognosis than FB-GBC, therefore NC-GBC will require more active treatments. In order to provide more accurate data on the impact of longitudinal tumor location on prognosis, large-volume studies such as nationwide or international study will be needed.