P013

Postoperative infectious complications decrease overall and recurrence-free survival in patients undergoing liver resection for hepatocellular carcinoma

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Introduction : Postoperative complications greatly impact postoperative course and long-term outcomes in patients who underwent liver resection for hepatocellular carcinoma (HCC). Among them, infectious complications play a relevant role. The aim of this study was to evaluate if postoperative infectious complications impact long-term survival after liver resection for HCC.

Methods : A total of patients undergoing curative liver resections for HCC were retrospectively analyzed from a multi-institutional database. Independent risk factors of postoperative infectious complications were identified. After excluding patients with postoperative early deaths (< 90 days), the long-term overall survival (OS) and recurrence-free survival (RFS) were compared between patients with and without postoperative 30-day infectious complications.

Results : Among 2442 patients identified, 332 had postoperative 30-day infectious complications. Age > 60 years, diabetes mellitus, obesity, cirrhosis, intraoperative blood transfusion, operative time > 180 min and major hepatectomy were identified as the independent risk factors of postoperative infectious complications. In univariable analyses, median OS and RFS of patients with postoperative infectious complications were significantly poorer than those of patients without (86.8 vs. 43.2, and 54.3 vs. 22.6 months, both P < 0.001). After adjustment for other prognostic variables, multivariable Cox-regression analyses identified that postoperative infectious complications were independently associated with decreased OS (hazard ratio: 1.199, 95% CI: 1.021-1.660, P = 0.027) and RFS (hazard ratio: 1.187, 95% CI: 1.027-1.372, P = 0.021).

Conclusions : Postoperative infectious complications decrease long-term OS and RFS in patients undergoing curative liver resection for HCC. To reducing the incidence of infectious complications, preoperative optimization, surgical procedure and postoperative care should be carefully planned.

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