Outcome of surgical management of LC-related major bile duct injuries

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Objectives: Laparoscopic cholecystectomy (LC) associated bile duct injury (BDI) is a clinical problem with poor outcome. The study aimed to analyze the outcome of surgical management of these injuries.

Patients & Methods: We retrospectively analyzed 69 patients who underwent surgical management of LC related major BDI, in the period from mid-2011 to mid-2015.

Results: Regarding injury type; the leaking, obstructing, leaking+obstructing, leaking+vascular, and obstructing+vascular injuries were 43.5%, 27.5%, 18.8%, 2.9%, and 7.2%, respectively. However, external biliary fistula affected 60.9%. The Strasberg classification of injury was as follow: E1=25, E2=32, E3=8 and E4=4. The definitive procedure was: End to end anastomosis with stent, HJ with or without stenting, and Rt hepatectomy plus biliary reconstruction with stenting in 4.3%, 87%, and 8.7% of patients, respectively. According to time of definitive procedure from injury; the immediate (before 72 h), intermediate (between 72 h and 1.5 months), and late (after 1.5 months) management were 13%, 14.5%, and 72.5%, respectively. The hospital and 1 month (early) morbidity after definitive treatment were 21.7%, while, late biliary morbidity was 17.4% and the overall mortality was 2.9%, on the other hand, late biliary morbidity-free survival was 79.7%. On univariate analysis, the following factors were significant predictors of early morbidity; Sepsis at referral, higher Strasberg grade, associated vascular injury, Rt hepatectomy with biliary reconstruction as a definitive procedure, intra-operative bleeding with blood transfusion, liver cirrhosis and longer operative times and hospital stays. However, the following factors were significantly associated with late biliary morbidity: Sepsis at referral, end to end anastomosis with stenting, Reconstruction without stenting, liver cirrhosis, operative bleeding and early morbidity.

Conclusion: Sepsis at referral, liver cirrhosis and operative bleeding were significantly associated with both early and late morbidities after definitive management of LC related major BDI, so it is crucial to avoid these catastrophes while performing those major procedures.

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