

Outcomes of Surgical Repair after Bile Duct Injury During a Laparoscopic Cholecystectomy

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Abstract : Background : A laparoscopic cholecystectomy (LC) has resulted in significant advantages for patients with biliary tract stone disease. However, recent reviews of accumulated cases of LC have also shown the incidence of biliary injury to be higher in cases of LC than in cases of conventional open cholecystectomy. Aim : The aim of this study was to review the outcomes after a surgical repair for bile duct injury during an LC. Methods : Nineteen patients who suffered bile duct injury during an LC over a 15-year period were analyzed. Results : A diagnosis of bile duct injury was made during surgery in 13 patients, and after surgery in 6 patients. Eighteen patients suffered an injury to the common bile duct, while the remaining patient had an injury to the right hepatic duct. As for the degree of injury, 12 patients had their bile ducts transected, 1 patient had bile duct necrosis, and 5 patients incurred a partial bile duct injury, while one patient had a clipping injury. A primary closure in 5 patients for a partial injury and the removal of a clip resulted in smooth postoperative courses. The indwelling t-tube over 31 months in one patient who developed bile duct necrosis also showed a favorable postoperative course. For the other 14 patients, duct-to-duct anastomosis was performed in 8 patients, a hepaticojejunostomy was performed in 5, and one patient underwent a hepaticoduodenostomy. However, 7 patients after duct-to-duct anastomosis in 6 and one who underwent a hepaticoduodenostomy developed stricture of the anastomotic sites from 6 to 15 months after surgery. The other two patients with a long-term indwelling stent showed smooth postoperative courses. Three out of the 5 patients who underwent an initial hepatico-jejunostomy developed biliary stricture. These 3 patients were consequently converted to a rehepaticojejunostomy, a liver transplantation and an extended right hepatectomy, respectively. Conclusions : A hepaticojejunostomy remains the gold standard treatment for a severely injured bile duct during an LC. Duct-to-duct anastomosis with the use of a long-term indwelling stent may also be considered when making a surgical repair in some cases.

Key words : Laparoscopic Cholecystectomy, Bile Duct Injury Outcomes after Surgical Repair