stitution were studied retrospectively. We divided them into 3 groups. Group I included 494 patients who underwent elective LC without pre-operative PTGBD, group II included 97 patients who intended to undergo elective LC after preoperative PTGBD, and group III included 147 patients who underwent emergency LC without preoperative PTGBD. We compared age, sex, symptom duration, body temperature, leukocyte counts, and American Society of Anesthesiologists (ASA) class upon admission as clinical characteristics. We compared the time interval from symptom development and admission to surgery, operative time, the conversion rate to open surgery, postoperative complications, the total length of stay, and the postoperative length of stay as perioperative surgical outcomes.

Results: For ASA 2 and 3 patients, the conversion rate to open surgery in group II was significantly less than that in group III ($p<0.05$). For ASA 1 patients in groups II and III, there were no significant differences in perioperative surgical outcomes, excluding operative times, between the two groups.

Conclusions: We recommend PTGBD as the first choice for acute cholecystitis in patients who show no improvement after IMMx, to allow the patient to undergo an elective LC rather than emergency surgery for ASA 2 and 3 patients.

III-5

The Value of Preoperative Magnetic Resonance Cholangiopancreatography (MRCP) to Prevent Bile Duct Injury in Patients Who Will Perform Laparoscopic Cholecystectomy

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Background: The aim of this study is to evaluate the value of preoperative MRCP prior to cholecystectomy by analyzing the rate of clinically inapparent common bile duct stone or duct anomaly and postoperative complication.

Methods: Between 2009.12 – 2010.12, 486 patients underwent cholecystectomy due to benign biliary disease. Among these patients, 144 were performed MRCP preoperatively and classified as group I. Remaining 342 patients who were not taken MRCP were classified as group II. We analyzed preoperative biliary anomaly based on MRCP and postoperative complication in both group.

Results: In group I, pre-operative MRCP screening revealed clinically silent common bile duct(CBD) stones in 7 patients (4.9%), abnormal cystic duct insertion into CBD in 5 patients (3.5%) and intrahepatic duct stone in a patient. In 18 patients of group I (12.5%), bile duct anomalies were revealed including 11 patients of Type C2 anomaly and 5 patients of type B anomaly. Although , a case of bile duct injury was occurred in group II in contrast with no bile duct injury in group II, there was no significant difference of postoperative complication in both group.

Conclusion: MRCP may be useful to evaluate bile duct anomaly and reveal hidden bile duct stones. However, this modality did not show benefits for reducing bile duct injury in cholecystectomy. Therefore, routine MRCP scan for cholecystectomy may not be justified.

III-6

Early Experience of Laparoscopic Management for Choledochal Cysts

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Purpose: Choledochal cyst is a rare benign disease which has a congenital dilatation of the biliary tree. Total excision of cyst with hepaticojejunostomy is known as the treatment of choice because of the risk for biliary cancer including the gallbladder. Laparoscopic approaches have been reported as feasible in choledochal cyst. This study presents our early experience of laparoscopic excision for choledochal cysts with Roux-en-Y biliary reconstruction.

Materials and Methods: Between July 2009 and January 2011, 15 patients had been tried to undergo laparoscopic excision for choledochal cyst at Division of Hepatobiliary and Pancreatic Surgery, Asan Medical Center. Clinical, radiological and surgical data includ-

ing age, gender, type of choledochal cyst, surgical technique, conversion rate, morbidity, and mortality were analyzed retrospectively.

Results: The male to female ratio was 1:2.75 (4:11), and the mean age was 36.1 years (17-55). According to Todani classification, there were two patients of type Ia, six of type Ic, six of type IVa and one of type IVb. The mean operation time was 424min (288-524 min). No operative or postoperative transfusion was required. The average body mass index was 23.3 kg/m^2 (range, 18.4-31.7). All the patients underwent this laparoscopic procedure using a four-hole method. Of nine patients who underwent totally laparoscopic procedure, initial two patients were made their jejunojejunostomy with extracorporeal method, and the other 7 patients with intracorporeal jejunojejunostomy. Conversion to laparotomy was required for six patients (40%), and their cause were bleeding near liver hilum (n=1), venous congestion of Roux jejunal limb (n=1) and severe fibrosis and inflammation around cyst (n=4), respectively. On postoperative three days, oral feedings were resumed in all patients. The mean postoperative hospital stay was 11.9 (8-36) days. There was no major complication including anastomotic leakage, postoperative bleeding, obstruction, or abnormal fluid collection. The mortality rate and the incidence of carcinoma was 0%.

Conclusions: Morbidity and mortality rates after laparoscopic management for choledochal cysts are comparable with previously reported results. On the other hand, conversion rate, mean operation time and hospital stay reveals not so favorable results. However, considering the requirements related to a greater degree of laparoscopic skill and dexterity, with acceptable experience both in complex biliary-pancreatic operation and advanced laparoscopic surgery, laparoscopic management for choledochal cysts using a four-hole method is one of technically challenging and advantageous treatment option.