

Changing clinical profile, management strategies and outcome of patients with biliary tract injuries at a tertiary care center in Sri Lanka

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BACKGROUND: Biliary tract injuries are mostly iatrogenic. Related data are limited in developing countries. There are lessons to be learned by revisiting the clinical profiles, management issues and outcome of patients referred to a tertiary care center in Sri Lanka, compared with the previous data from the same center published in 2006. Such a review is particularly relevant at a time of changing global perceptions of iatrogenic biliary injuries. This study aimed to analyze and compare the changes in the injury pattern, management and outcome following biliary tract injury in a Sri Lankan study population treated at a tertiary care center.

METHODS: A retrospective analysis was made of 67 patients treated between May 2002 and February 2011. The profiles of the last 38 patients treated from October 2006 to February 2011 were compared with those of the first 29 patients treated from May 2002 to September 2006. Definitive management options included endoscopic biliary stenting, reconstructive hepaticojejunostomy with creation of gastric access loops, and biliary stricture dilation. Post-treatment jaundice, cholangitis and abdominal pain needing intervention were considered as treatment failures.

RESULTS: In the 67 patients, 55 were women and 12 men. Their mean age was 40.6 (range 19-80) years. Five patients had traumatic injuries. Thirty-seven injuries (23 during the second study period) were due to laparoscopic cholecystectomy and 25 (10 during the second study period) to open cholecystectomy. The identification rate of intra-operative injury was 19% in the laparoscopic group and 8% in the open group. Bismuth type

I, II, III and IV injuries were seen in 18, 18, 15 and 12 patients, respectively. Endoscopic stenting was the definitive treatment in 20 patients. In 35 patients who had hepaticojejunostomy, 33 underwent creation of the gastric access loop. Twenty-two reconstructions were performed during the second study period. A gastric access loop was used for endotherapy in three patients with anastomotic occlusion at the site of hepaticojejunostomy. The overall outcome was satisfactory in the majority of patients. There were four injury-related deaths.

CONCLUSIONS: Biliary tract injuries associated with laparoscopic cholecystectomy have become the most frequent cause of biliary injury management at our center. Although endotherapy was useful in selected patients, in the majority, surgical reconstruction with hepaticojejunostomy was required as the definitive treatment. Creation of the gastric access loop was found to be a useful adjunct in the management of hepaticojejunostomy strictures.

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KEY WORDS: gastric access loop;
hepaticojejunostomy;
endoscopic biliary stenting;
biliary tract injuries

Introduction

Biliary tract injuries create a management challenge to the surgeon.^[1] Iatrogenic injury during chole-