

Laparoscopic cholecystectomy has superiority over classical cholecystectomy in surgical management of gallbladder diseases. The main disadvantage of LC is an increased number of bile duct injuries. Many techniques have been used to eliminate this complication; however, most of these need specific equipment or expert specialists to interpret the results. The current study aimed to evaluate the efficiency of gallbladder coloration with methylene blue during laparoscopic cholecystectomy in reduction of bile duct injuries. A total of 98 symptomatic cholelithiasis patients were undergone laparoscopic cholecystectomy using methylene blue for delineation of the gallbladder. The gallbladder fundus was grasped and held tight towards the anterior abdominal wall. All the bile was aspirated and 50% or more methylene blue was injected slowly into the gallbladder which was then removed from the abdominal cavity. Operation time, hospital stay and complications, if any, were recorded. In addition, the coloration of different parts in different status of gallbladder was also evaluated. The results showed that mean operation time and hospital stay were 55min and 26hrs respectively. No bile duct injury was recorded, and coloration with MB was visible in four main anatomical parts of the gallbladder (gallbladder, cystic-Hartmann's pouch, junction, cystic duct and common bile duct). In uncomplicated gallstone, almost all parts of the gallbladder colored well; however, a noticeable reduction in coloration was observed especially in cystic duct and common bile duct in complicated cases.

Based on these results, it can be concluded that injection of MB could be considered as safe, effective and cheap technique to reduce or even eliminate BDIs during LC.