



One-stage versus two-stage approach for concomitant gallbladder and common bile duct stones: which one is more proper in patients over 80 years old?

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At present, the optimal treatment for common bile duct (CBD) stones combined with gallstones is still controversial. The two most widely accepted techniques are one-stage laparoscopic CBD exploration plus laparoscopic cholecystectomy (LC) and two-stage preoperative endoscopic sphincterotomy plus LC. Considering that all current evidence comes from nonrandomized controlled trials, multicenter randomized controlled trials are needed to further establish the treatment strategy for elderly patients with CBD stones combined with gallstones.

Keywords: Gallstones, Common bile duct, Laparoscopic cholecystectomy, Endoscopic sphincterotomy

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Since the introduction of laparoscopic cholecystectomy (LC), the optimal treatment for common bile duct (CBD) stones combined with gallstones, a condition known as cholecysto-choledocholithiasis (CCL), remained controversial for years despite the results of several randomized controlled trials comparing one-stage laparoscopic CBD exploration (LCBDE) plus LC (LCBDE + LC) and two-stage preoperative endoscopic retrograde cholangiopancreatography with sphincterotomy plus LC (pre-ERCP + LC) [1–8]. In general, the one-stage procedure is expected to reduce the overall hospital stay and cost, albeit being highly technically demanding. Especially, elderly patients had higher incidences of cardiovascular disease and pulmonary disease, as well as higher grades of American Society of Anesthesiologists physical status classification, implying that they might have greater potential risks for laparoscopic surgery and general anesthesia than young

patients. The two-stage procedure is associated with a higher CBD stone clearance and lower postoperative bile leakage, while a higher rate of pancreatitis is associated with endoscopic procedure. In addition, ERCP-caused dysfunction of the sphincter of Oddi can be permanent, leading to damage of the sphincter barrier and duodenobiliary reflux.

For elderly patients, choosing the best treatment strategy between two procedures is a more difficult process than young patients because elderly patients typically have underlying chronic diseases and age-specific deterioration of organ function. Consequently, they are classified as a high-risk group for surgery under general anesthesia. Furthermore, elderly patients are associated with high morbidity during the perioperative period, so endoscopic alternatives may be preferred. However, the risk of ERCP-associated complications also increases in elderly patients,

and their cooperation can be limited due to physical or mental impairments and anatomical complexities, such as periampullary diverticula, which increase the failure rate of endoscopic procedures.

This study compared one-stage LCBDE + LC and two-stage pre-ERCP + LC for patients with CCL over 80 years of age [9]. The results showed no significant difference between these approaches in terms of treatment safety and efficacy such as postoperative morbidity and hospital stay. However, in the one-stage LCBDE + LC group, there were more patients with previous gastrectomy, multiple large (≥ 15 mm) CBD stones, or the inability to cooperate with endoscopic procedures. Importantly, this study indicates that the one-stage LCBDE + LC is a better treatment option for elderly patients with these conditions.

NOTES

Conflict of interest

The author has no conflicts of interest to declare.

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