SURGICAL EVIDENCE

By
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We present published evidence on surgical practice that does not require specialized training or significant resources for its implementation. Surgeons are advised to read the full text of the evidence before following the study conclusions.

Early laparoscopic cholecystectomy improves outcomes after endoscopic sphincterotomy for choledochocystolithiasis

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Background & Aims: Patients with choledochocystolithiasis generally undergo endoscopic sphincterotomy (ES) followed by laparoscopic cholecystectomy (LC). However, many patients receive this surgery 6-8 weeks after ES. There is a high conversion rate of elective LC after ES, and patients can develop recurrent biliary events during the waiting period. We investigated whether the timing of surgery influences outcome.

Methods: We performed a randomized trial of patients with choledochocystolithiasis who underwent successful ES. Patients were randomly assigned to groups that received early LC (within 72 hours after ES, n = 49) or delayed LC (after 6-8 weeks, n = 47), based on an expected difference in conversion rate of 25% vs 5%, respectively. Conversion rate, biliary events during follow-up, duration and difficulty of surgeries, postoperative morbidity, and hospital stay were scored. Intention-to-treat analyses were performed.

Results: Groups were comparable in age, sex, and comorbidity. There was no difference between groups in conversion rate (4.3% in early vs 8.7% in delayed group) nor were there differences in operating times and/or difficulties or hospital stays. During the waiting period for LC, 17 patients in the delayed group (36.2%) developed recurrent biliary events compared with 1 patient in the early group ($P < .001$).

Conclusions: In a randomized trial to evaluate timing of LC after ES, recurrent biliary events occurred in 36.2% of patients whose LC was delayed for 6-8 weeks. Early LC (within 72 hours) appears to be safe and might prevent the majority of biliary events in this period following sphincterotomy.

Effect of dexamethasone on postoperative symptoms in patients undergoing elective laparoscopic cholecystectomy: randomized clinical trial

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Background: Dexamethasone has been reported to reduce postoperative nausea and vomiting (PONV) after laparoscopic cholecystectomy (LC). However, its effects on other surgical outcomes, such as pain and fatigue, have been unclear. We evaluated the efficacy of preoperative dexamethasone for ameliorating postoperative symptoms after LC.

Methods: In this prospective, double-blind, placebo-controlled study, 210 patients scheduled for elective LC were analyzed after randomization to intravenous dexamethasone (8 mg) or a placebo. All patients underwent standardized procedures for general anesthesia and surgery. Episodes of PONV and the pain and fatigue scores were recorded on a visual analog scale. Analgesic and antiemetic requirements were also recorded.

Results: There were no significant differences between groups with regard to medical or demographic variables. Significantly fewer patients experienced PONV in the dexamethasone group immediately after LC and at 6 and 12 h. The need for ondansetron to relieve PONV was higher in the placebo group (P = 0.001). Patients in the study group reported less postoperative pain during the first 24 h and less fatigue after 6, 12, and 24 h. The need for buprenorphine to relieve intolerable pain was also less in this group (P = 0.009). There were no side effects, and the morbidity was similar in the two groups (6.7 vs. 7.6%).

Conclusions: The regimen we employed is safe and without apparent side effects. Thus, preoperative dexamethasone can significantly reduce the incidence of PONV, pain and fatigue after elective LC.

Antibiotic therapy for prophylaxis against infection of pancreatic necrosis in acute pancreatitis

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Cochrane Database Syst Rev. 2010;5:CD002941.

Background: Pancreatic necrosis may complicate severe acute pancreatitis, and is detectable by computed tomography (CT). If it becomes infected mortality increases, but the use of prophylactic antibiotics raises concerns about antibiotic resistance and fungal infection.

Objectives: To determine the efficacy and safety of prophylactic antibiotics in acute pancreatitis complicated by CT proven pancreatic necrosis.

Search Strategy: Searches were updated in November 2008, in The Cochrane Library (Issue 2, 2008), MEDLINE, EMBASE, and CINAHL. Conference proceedings and references from found articles were also searched.

Selection Criteria: Randomised controlled trials (RCTs) comparing antibiotics versus placebo in acute pancreatitis with CT proven necrosis.

Data Collection and Analysis: Primary outcomes were mortality and pancreatic infection rates. Secondary end-points included non pancreatic infection, all sites infection, operative rates, fungal infections, and antibiotic resistance. Subgroup analyses were performed for antibiotic regimen (beta-lactam, quinolone, and imipenem).

Main Results: Seven evaluable studies randomised 404 patients. There was no statistically significant effect on reduction of mortality with therapy: 8.4% versus controls 14.4%, and infected pancreatic necrosis rates: 19.7% versus controls 24.4%.

Non-pancreatic infection rates and the incidence of overall infections were not significantly reduced with antibiotics: 23.7% versus 36%; 37.5% versus 51.9% respectively. Operative treatment and fungal infections were not significantly different. Insufficient data were provided concerning antibiotic resistance.With beta-lactam antibiotic prophylaxis there was less mortality (9.4% treatment, 15% controls), and less infected pancreatic necrosis (16.8% treatment group, 24.2% controls) but this was not statistically significant. The incidence of non-pancreatic infections was non-significantly different (21% versus 32.5%), as was the incidence of overall infections (34.4% versus 52.8%), and operative treatment rates. No significant differences were seen with quinolone plus imidazole in any of the end points measured. Imipenem on its own showed no difference in the incidence of mortality, but there was a significant reduction in the rate of pancreatic infection (p=0.02; RR 0.34, 95% CI 0.13 to 0.84).

Authors' Conclusions: No benefit of antibiotics in preventing infection of pancreatic necrosis or mortality was found, except for when imipenem (a beta-lactam) was considered on its own, where a significantly decrease in pancreatic infection was found. None of the studies included in this review were adequately powered. Further better designed studies are needed if the use of antibiotic prophylaxis is to be recommended