Letters

Emergency surgery model improves outcomes for patients with acute cholecystitis

To the Editor: Reducing the time from presentation to cholecystectomy in patients with acute cholecystitis has been shown to benefit patients (eg, by reducing the duration of patient discomfort before surgery) and to be cost-effective.[1-3] Benefits have also been shown for performing cholecystectomy during the index admission for gallstone pancreatitis.[4]

Geelong Hospital (in regional Victoria) introduced daily general surgery emergency theatre sessions in February 2011. We compared 401 patients who presented to the emergency department (ED) with acute cholecystitis from February 2008 to January 2011 (control period) with 137 who presented from February 2011 to January 2012 (intervention period). We also compared patients who presented with gallstone pancreatitis — 91 in the control period and 38 in the intervention period. For patients who underwent cholecystectomy during their index admission, we analysed the time of presentation to the ED and time of surgery. Complication rates (for bile duct injury, bile leak requiring intervention, unplanned endoscopic retrograde cholangiopancreatography, mortality or unplanned reoperation) were analysed by medical record review.

We found an increase in the proportion of patients with acute cholecystitis who had a cholecystectomy during their index admission, excluding those who were transferred to the private system, from 53% (199/373) to 72% (94/130) ($P < 0.001$). We also found a decrease in the median waiting time from patient arrival in the ED to operation for those with acute cholecystitis who had a cholecystectomy during their index admission, from 41.8 to 26.4 hours ($P < 0.001$). However, there was no significant difference in the complication rate for patients with acute cholecystitis who received a cholecystectomy in the control and intervention periods ($P = 0.96$).

Patients with gallstone pancreatitis underwent a cholecystectomy after their pancreatitis had settled. Of those who presented with gallstone pancreatitis in the control period, 42% (38/91) had their cholecystectomy during their index admission; this increased to 63% (24/38) in the intervention period ($P = 0.03$).

The proportion of cholecystectomies (for acute cholecystitis or gallstone pancreatitis) performed after-hours did not increase, despite an increase, from 51% to 70%, in patients receiving cholecystectomy during their index admission. Operations were performed in-hours for 73% (172/237) of those who underwent cholecystectomy during their index admission in the control period and 70% (83/118) of those who underwent cholecystectomy during their index admission in the intervention period ($P = 0.15$). For both of these groups, the median postoperative length of stay was 2 days ($P = 0.67$).

These data show that introducing dedicated general surgery emergency theatre sessions improved our ability to perform surgery in a timely manner for patients who presented with cholecystitis or gallstone pancreatitis.

Daniel P McGlade Surgical Registrar

David A Watters Professor of Surgery

Douglas A Stupart Surgeon

Barwon Health, Geelong, VIC.
daniel.mcglade@act.gov.au

Competing interests: No relevant disclosures.

doi: 10.5694/mja12.11562

1 Banz V, Gsponer T, Candinas D, Güller U. Population-based analysis of 4113 patients with acute cholecystitis: defining the optimal time-point for laparoscopic cholecystectomy. *Ann Surg* 2011; 254: 964-970.
2 Chang TC, Lin MT, Wu MH, et al. Evaluation of early versus delayed laparoscopic cholecystectomy in the treatment of acute cholecystitis. *Hepatogastroenterology* 2009; 56: 26-28.
3 González-Rodríguez FJ, Paredes-Cotoré JP, Pontón C, et al. Early or delayed laparoscopic cholecystectomy in acute cholecystitis? Conclusions of a controlled trial. *Hepatogastroenterology* 2009; 56: 11-16.
4 El-Dhuwaib Y, Deakin M, David GG, et al. Definitive management of gallstone pancreatitis in England. *Ann R Coll Surg Engl* 2012; 94: 402-406.

> “introducing dedicated general surgery emergency theatre sessions improved our ability to perform surgery in a timely manner”
>
> McGlade et al