LETTER TO THE EDITOR

Single Incision Laparoscopic Cholecystectomy Is Associated With a Higher Bile Duct Injury Rate: A Review and Word of Caution

To the Editor:
In their article “Single Incision Laparoscopic Cholecystectomy Is Associated With a Higher Bile Duct Injury Rate,” Joseph et al. conclude that “There seems to be an increase in the rate of bile duct injuries during SILC when compared with historic rates during SLC.” SILC refers to single incision laparoscopic cholecystectomy and SLC to standard laparoscopic cholecystectomy. Unfortunately, their study contains significant flaws, and this conclusion cannot reasonably be drawn on the basis of this piece of research.

The authors performed a thorough review of electronic databases, and appropriately excluded papers with very small numbers, as the surgeons could be expected to be on the steep part of the learning curve. The authors comment that “Meta-analysis was not appropriate because of the heterogeneous nature of the included studies and the lack of a controlled comparative arm” and this is a very reasonable comment. However, having stated that meta-analysis is not possible, it was unreasonable of the authors to then go ahead and pool the data for bile duct injuries to give the single summary statistic of a 0.72% rate of bile duct injury for SILC.

In the Methods section the authors note that “Data were analyzed . . . with the assistance of a biostatistician.” However, despite the conclusion that there seems to be a higher rate of injury with SILC, there is no statistical analysis offered in support of this proposition. The authors do make reference to the rates of bile duct injury at SLC and, in the Discussion section they offer the comment that “Latest estimates put the new plateau at 0.4% to 0.5%” and they reference the paper by Flum et al.

In fact, this article was published in 2003, which makes it a poor choice for the “latest estimate.” In a burgeoning literature, this 10-year-old paper is potentially of historical interest only. A Medline search conducted on June 30, 2012, through the portal of the Royal Australasian College of Surgeons (employing the simple strategy of using “bile duct injury” as a keyword), reveals 747 articles overall, with 65 published in the last year, of which 13 were review articles. It is disappointing that Dr Joseph and his colleagues did not offer the journal a more appropriate view of electronic databases, and appropriately excluded papers with very small numbers, as the surgeons could be expected to be on the steep part of the learning curve. The authors comment that “Meta-analysis was not appropriate because of the heterogeneous nature of the included studies and the lack of a controlled comparative arm” and this is a very reasonable comment. However, having stated that meta-analysis is not possible, it was unreasonable of the authors to then go ahead and pool the data for bile duct injuries to give the single summary statistic of a 0.72% rate of bile duct injury for SILC.

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Beyond its age, the article by Flum et al. is a completely inappropriate comparison because of the nature of bile duct injuries described. In that article, the cases of bile duct injury were identified by virtue of the fact that they had reconstructive surgery to the biliary tree within 365 days of a laparoscopic cholecystectomy. In other words, they were all patients with severe injuries, whereas Joseph et al. include patients with all levels of the Strasberg classification of bile duct injuries. The authors note that 11 of the 19 injuries were Strasberg type A, reflecting a bile leak from a minor duct still in continuity with the common bile duct. Dr Strasberg makes this point in his editorial on the article by Joseph et al. He points out that, if the Strasberg A type injuries are excluded, the rate of more serious bile duct injury reported by Joseph et al. is 0.30%.

Hence, the article by Joseph et al. has several flaws: an overall summary statistic is generated despite the authors’ comment that meta-analysis is not possible; comparative conclusions are drawn without a statistical comparison to support them; and the comparator statistic offered for discussion refers to an old paper that deals with a severe subset of common bile duct injuries. It seems to be impossible to base any useful conclusion on this review of SILC.

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REFERENCES