The Critical View of Safety and Routine Intraoperative Cholangiography Complement Each Other as Safety Measures During Cholecystectomy

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LETTER TO THE EDITOR

The Critical View of Safety and Routine Intraoperative Cholangiography Complement Each Other as Safety Measures During Cholecystectomy

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Dear Editor,

We read, with great interest, the study by Sanjay et al. in which they describe the outcome of 447 cholecystectomies using the critical view of safety (CVS) technique.[1] The authors are to be congratulated for performing a medium-sized series of cholecystectomies for acute pathology with no bile duct injuries or leaks. We, too, fully endorse the practice of careful dissection in the triangle of Calot and achievement of the CVS before clipping and dividing any tubular structures. However, rather than viewing the CVS as a replacement for routine intraoperative cholangiography (IOC), we feel that the two safety measures complement each other.

Sanjay and colleagues rightly argue that the large population-based studies often used to propagate routine IOC date from the pre-CVS era.[2,3] They continue to suggest that this protective effect is therefore not to be expected in modern surgical practice. In our point of view, this is an unlikely assertion.

The CVS has been standard practice in the Netherlands for several years. A recent nationwide survey by our group confirmed that 98% of the Dutch surgeons use this technique.[4] Nonetheless, common bile duct (CBD) injuries remain a substantial problem in the Netherlands with an incidence that is estimated to be higher than the 0.5% often quoted in literature.[5] Referrals to the largest tertiary referral center for bile duct injury (BDI) in the Netherlands show no decreasing trend in the course of the past decade.[6] In our own center, eight CBD injuries (1.9%) occurred between 2004 and 2006 despite the use of the CVS technique. In January 2007, routine IOC was implemented, and no CBD injuries were observed in the 3 years thereafter ($p=0.004$) (unpublished data).

IOC reduces the risk of BDI in several ways at different levels ranging from revealing which duct has been cannulated and demonstrating aberrant anatomy to increasing surgeon insight into the diversity of anatomical variations. These advantages cannot be replaced by CVS technique.

It may be argued that IOC could be performed selectively in case of uncertain anatomy. There are two arguments against this option. Firstly, it is unclear whether surgeons can reliably identify patients at higher risk for BDI. Secondly, the importance of IOC becoming a routine part of the procedure is that the whole team expects it, is ready for it, and can plan for it. Only then does it fit smoothly into the operative routine. Selectively performing IOC may lead to unfamiliarity with the technique and raise the threshold to perform it.

Sanjay et al. mention that opponents of IOC caution that it is a potentially hazardous procedure. However, there is virtually no evidence that IOC leads to complications rather than prevents them. The negligible amount of radiation received, too, is not a valid argument against its use in the adult population.[7]

Although we applaud the efforts of Sanjay et al. to further advocate the CVS technique as optimal surgical technique to prevent BDI, we feel that routine IOC should not be abandoned as an additional safety measure. Bile duct injury has serious, sometimes fatal, consequences.[8] It is a frequently performed "routine" operation and such complications are especially difficult for patients and surgeons to accept. We advocate, therefore, that both the CVS technique and routine IOC are used to complement each other for the safest way to remove the gallbladder.

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