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Correspondence

What is the critical view of safety in laparoscopic cholecystectomy? – Correspondence

Laparoscopic cholecystectomy is the most common laparoscopic surgery performed by general surgeons. Despite increase in operative experience and new approaches in laparoscopic techniques, bile duct injuries remain twice as frequent as in the conventional open approach [1]. The "critical view of safety" (CVS) in laparoscopic cholecystectomy serves the unequivocal identification of the cystic duct before transection as the cause of most major bile duct injuries is misidentification of ductal structures. See Fig. 1. In the "classical" injury, the common bile duct is thought to be the cystic duct and is divided [4]. CVS is based on a method of anatomic identification in open cholecystectomy. The critical view of safety (CVS) is a method to target identification of the cystic duct and the cystic artery. See Fig. 2. Currently CVS is taught and used widely in laparoscopic surgery. When CVS cannot be attained, there are several bailout strategies such as cholecystostomy for a case with very severe inflammation [2].

The complication rates of bile duct injuries after laparoscopic cholecystectomy vary from 0.4% to 0.5%, depending on the underlying disease and they remain higher than in the open approach [1].

The following are 6 suggested strategies surgeons can employ to adopt a universal culture of introducing safety to cholecystectomy and to minimize the risk of bile duct injuries.

1. Use the Critical View of Safety (CVS) method to identify the cystic duct and cystic artery during laparoscopic cholecystectomy.
2. Understand the potential of aberrant anatomy in patients.

Aberrant anatomy may include a short cystic duct, aberrant hepatic ducts, or a right hepatic artery that crosses anterior to the common bile duct. These are just some, but not all, common variants [5].

3. Liberal use of cholangiography or other methods to image the biliary tree intraoperatively [3].
4. Use an Intraoperative Momentary Pause during laparoscopic cholecystectomy prior to clipping, cutting, or transecting any ductal structures.
5. Consider laparoscopic subtotal cholecystectomy, cholecystostomy, and/or conversion to an open procedure based on the judgment of the attending surgeon.
6. Get help from another surgeon when dissection or conditions in identification of anatomical structure become difficult.

In summary, CVS is an excellent method of anatomical identification in laparoscopic cholecystectomy. However, sufficient mobilization of the gallbladder from its bed is essential in performing a critical view of safety in laparoscopic cholecystectomy. These strategies are based on the best available evidence. They are intended to make a safe operation safer. The final decision on how to proceed should be made by the operating surgeon according to his/her experience and judgment [2].

Provenance and peer review

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Ethical approval

No ethical approval is required. Our institution does not demand ethical approval for case reports, as these projects are not investigational.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Author contribution

Hina Khalid, conceptualization, data curation, writing – original draft. Naveed Ali khan, review & editing. Munira Abdul Aziz, review & editing.

Registration of research studies

1. Name of the registry:
2. Unique identifying number or registration ID:
3. Hyperlink to your specific registration (must be publicly accessible and will be checked):

Guarantor

Hina Khalid.

Declaration of competing intrest

There is no conflicts of Interest, no sources of funding and also no institutional review board or ethical committee approval required for publishing a rare/unique case.

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Data not available/not applicable.

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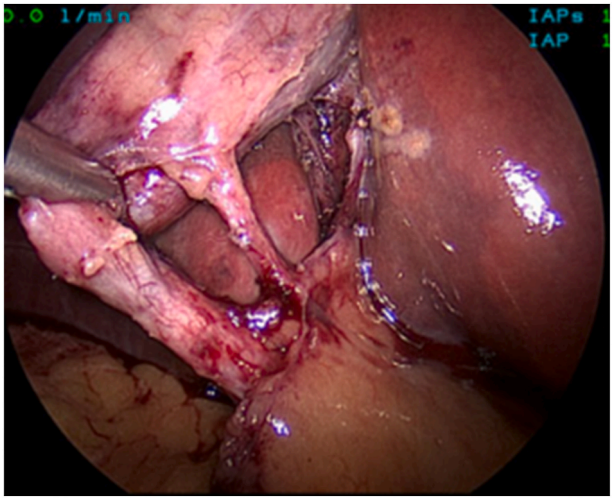


Fig. 1. Visualization of the critical view of safety (anterior).

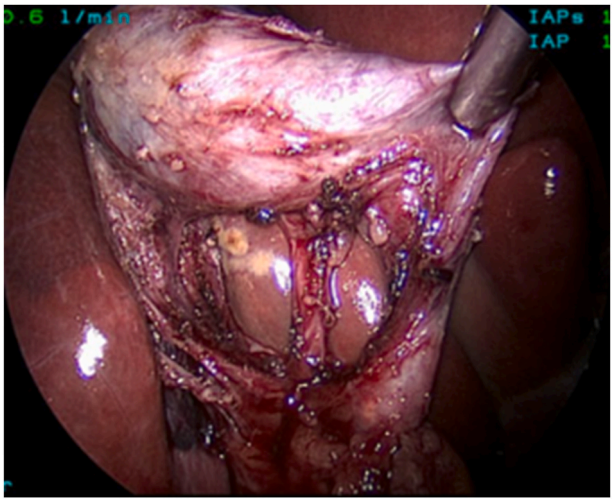


Fig. 2. Visualization of the critical view of safety (posterior).

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