

CHOLECYSTECTOMY IN PATIENTS WITH SEVERE INTRA-ABDOMINAL ADHESIONS: TECHNICAL FEATURES AND MANAGEMENT

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Annotation: *This article discusses the surgical nuances of performing a cholecystectomy in patients presenting with dense intra-abdominal adhesions caused by prior surgeries or chronic inflammation. The risks of hollow organ perforation during primary access, technical methods for safe adhesiolysis, and criteria for safe visual exposure are analyzed. Particular focus is placed on precision dissection within Calot's triangle and critical factors dictating the necessity of converting to an open procedure.*

Key words: cholecystectomy, adhesions, adhesiolysis, subhepatic infiltrate, intraoperative risks, conversion.

Severe abdominal adhesion tissue (particularly in the upper abdomen) significantly complicates cholecystectomy. The presence of dense viscerovisceral and visceroparietal adhesions involving the duodenum, colon, and greater omentum sharply elevates the risk of iatrogenic injuries. While extensive adhesive disease was historically considered an absolute contraindication to laparoscopy, the evolution of modern optical systems and ultrasonic dissection allows these cases to be managed endoscopically, provided that the standard surgical protocol is appropriately adapted.

Results and Discussion

1. Challenges of Intraoperative Access

The highest risk during the initial phase is the blind insertion of a Veress needle or primary trocar, which can lead to the perforation of a bowel loop fixed to the anterior abdominal wall.

- **Strategy:** Open access via the Hasson technique or introduction of the first optical trocar at a "safe zone" (such as Palmer's point in the left upper quadrant), far removed from previous surgical scars, is highly recommended.



2. Technical Maneuvers in Subhepatic Adhesiolysis

Dissecting adhesions around the gallbladder requires absolute adherence to precision surgery guidelines:

- **"Known to Unknown" Dissection:** Dissection begins at peripheral, macroscopically unaffected segments of the liver, gradually advancing toward the structures of the gallbladder neck.
- **Instrumentation:** Monopolar coagulation should be restricted near hollow viscera to avoid delayed thermal necrosis. Preference is given to "cold" sharp dissection with scissors, along with ultrasonic or bipolar shear systems.
- **Critical View of Safety (CVS):** Clipping and dividing the cystic duct and artery are strictly prohibited until the lower third of the gallbladder is entirely cleared and the liver bed is exposed.

3. Risks and the "Difficult Gallbladder" Concept

When anatomical structures cannot be differentiated due to a dense "stony" infiltrate, the surgical team must cease aggressive dissection to prevent common bile duct injury.

- **Alternative Approaches:** Performing a laparoscopic subtotal cholecystectomy (leaving a portion of the neck intact and closed internally) or executing a timely conversion to laparotomy (observed in 7–12% of cases involving severe scarring).

Conclusion

The presence of advanced adhesive disease is not an automatic contraindication to a laparoscopic approach. However, it demands a modified surgical algorithm: employing secure entry points, minimizing thermal spread near hollow organs, and strictly executing safe skeletonization concepts. Shifting to a subtotal resection or an open conversion should not be viewed as a surgical failure, but rather as a mature clinical decision prioritizing patient safety.



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