

Laparoscopic cholecystectomy

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Laparoscopic cholecystectomy is the procedure of choice for the majority of patients. The indications and preparation for cholecystectomy are the same whether it is performed by laparoscopy or by open technique. The patient is placed supine on the operating table. Following induction and maintenance of general anaesthesia, the abdomen is prepared in a standard fashion. Pneumoperitoneum is established. The authors' preference is to use an open subumbilical cut down with direct visualisation of the peritoneum to place the initial port. This port will function as the camera port. An angled telescope (30°) is preferred. Many surgeons prefer a 'closed' technique using a Janos Verres, 1903–1979, chest physician and chief of the Department of Internal Medicine, The Regional Hospital, Kapuvár, Hungary. Verres needle to establish pneumoperitoneum (see Chapter 7). Recently, single-port laparoscopic cholecystectomy has been described. Proponents report decreased postoperative pain and improved cosmesis. However, systematic reviews have reported a higher failure rate, longer operative time and increased blood loss without any substantive benefits with the technique. Additional operating ports are inserted in the subxiphoid area and in the right subcostal area. The patient is placed in a reverse Trendelenburg position slightly rotated to the left. This exposes the fundus of the gallbladder, which is retracted towards the diaphragm. The neck of the gallbladder is then retracted towards the right iliac fossa, exposing Calot's triangle. The key, as in open surgery, is the identification and safe dissection of Calot's triangle (Table 71.5). This area is laid wide open by dividing the peritoneum on the posterior and anterior aspects. The cystic duct is carefully defined, as is the cystic artery. The gallbladder is separated from the liver bed for about 2 cm to allow confirmation of the anatomy. Unless there are specific indications, routine cholangiogram is not performed. However, if doubt exists regarding the anatomy, cholangiogram is warranted. Real-time intraoperative imaging using indocyanine green (ICG) fluorescence cholangiography (with special scopes and imaging system) improves visualisation of the biliary tree during laparoscopic cholecystectomy and enables better visualisation and identification of the biliary tree. It can be considered a means of increasing the safety of laparoscopic cholecystectomy. This is likely to reduce risk of biliary duct injury. Once the anatomy is clearly defined and the triangle of Calot has been laid wide open, the cystic duct and artery are clipped and divided. The gallbladder is then removed from its bed by sharp or cautery dissection and, once free, removed via the umbilicus in a retrieval bag.

stones. Further Abdominal Liver History of Risk of evaluation USG: CBD function cholangitis or CBD required diameter tests pancreatitis stones Low, Absent Normal ≤ 6 mm None 2–3% Medium, Present 2×8 – 10 mm MRCP +/- 20–40% normal ERCP stone extraction High, Present, with $2 \times \geq 10$ mm MRCP +/- 50–80% jaundice normal ERCP stone extraction ERCP, endoscopic retrograde cholangiopancreatography; MRCP, magnetic resonance cholangiopancreatography; USG, ultrasonography.

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