

Open cholecystectomy

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For patients in whom a laparoscopic approach is not indicated or in whom conversion from a laparoscopic approach is required, open cholecystectomy is performed. An upper midline, short subcostal (Kocher) or right upper transverse incision is made, centred over the lateral border of the rectus muscle. The gallbladder is appropriately exposed and packs are placed on the hepatic flexure of the colon, the duodenum and the lesser omentum to ensure a clear view of the anatomy of the porta hepatis. These packs may be retracted by the assistant's hand ('It is the left hand of the assistant that does all the work' – Moynihan). An artery or Duval forceps is placed on the infundibulum of the gallbladder and the peritoneum overlying Calot's triangle is placed on a stretch. The peritoneum is then divided close to the wall of the gallbladder and the fat in the triangle of Calot carefully dissected away to expose the cystic artery and the cystic duct. The cystic duct is cleaned down to the CBD, whose position is clearly ascertained. The cystic artery is tied and divided. The whole of the triangle of Calot is displayed to ensure that the anatomy of the ducts is clear and the cystic duct is then divided between ligatures (Figure 71.32). The gall bladder is then dissected away from its bed. Emil Theodor Kocher , 1841–1917, Professor of Surgery , Bern, Switzerland, first surgeon to win the Nobel Prize in Physiology or Medicine (1909) for his work on the physiology and surgery of the thyroid gland. Pierre Alfred Duval , 1874–1941, Professor of Surgery , Paris, France -

cholecystectomy. Operative steps
Purpose Retraction (Figure 71.31a) Opens the hepatocystic triangle
Proper retraction in the Increases the angle between correct direction: the fundus the cystic duct and the CBD is retracted

towards the Limits the dissection
above patient's right shoulder and
Rouvière's sulcus the infundibulum
is retracted Mental and spatial
orientation inferolaterally towards
the of the anatomy, variation and
patient's right side landmarks Look
out for red /f_l ag signs Time out
The surgeon should recognise
Failure of timely progression these
clues, stop dissection and of the
dissection decide on the strategy
for safe Anatomical disorientation
operation before proceeding Dif
/f_i culty in visualisation of Do not
hesitate to seek a the operative

/f_i eld second opinion Dif /f_i culty
achieving CVS is a Achieve CVS (
Figure 71.31b) warning Clearance
of the hepatocystic Further
dissection may be triangle of all
/f_i brofatty and hazardous, with
an increased soft areolar tissue to
see risk of biliary and/or vascular
only 2 structures enter the injury
gallbladder (cystic artery and Stop
and recon /f_i rm (with the duct)
team/second surgeon) that CVS
has been achieved Exposure of the
cystic plate May be documented
by (Figure 71.31c) photographs
and/or video This is done by

separating the recordings
gallbladder from its liver bed to
expose at least the medial third of
the cystic plate To avoid bleeding
from the liver Separate the
gallbladder from sinuses and bile
leak the fossa This is done by
leaving the cystic plate attached to
liver CBD, common bile duct; CVS,
critical view of safety. (b) (c)
Figure 71.31 (a–c) Operative
images of laparoscopic cholecys

tectomy. See Table 71.5 for the important steps during operation (courtesy of Dr Sameer Rege, Mumbai, India).

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