Surgery Of Biliary system (4)

By

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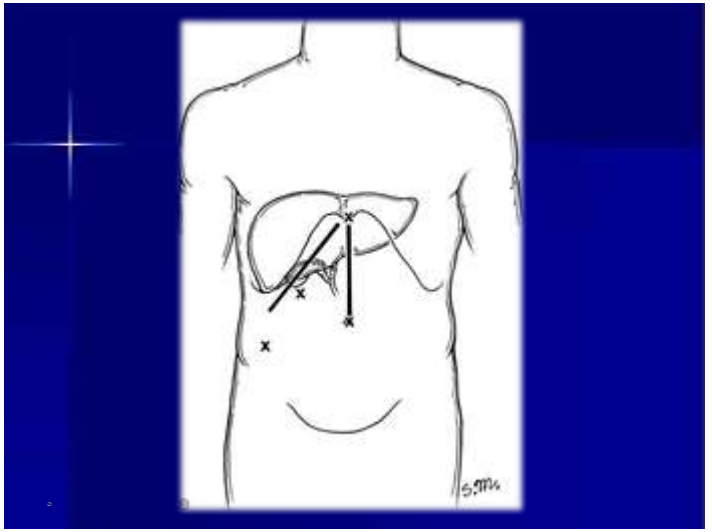
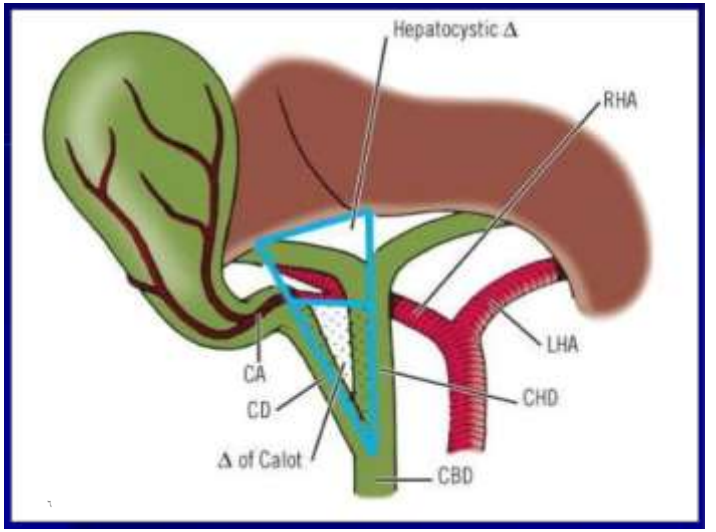
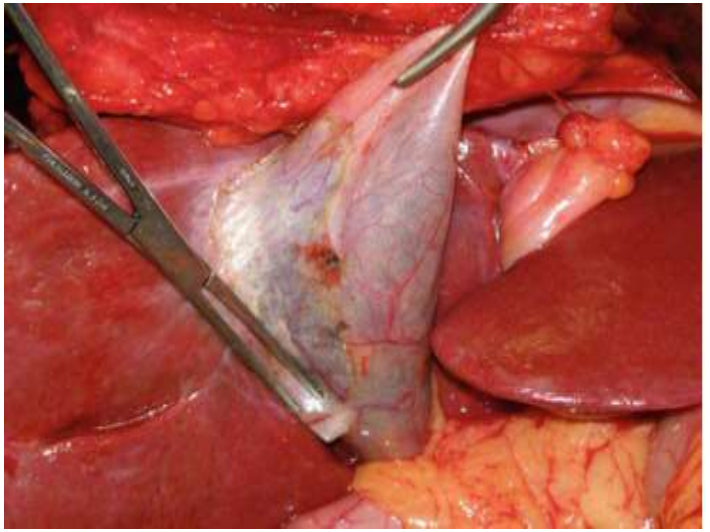
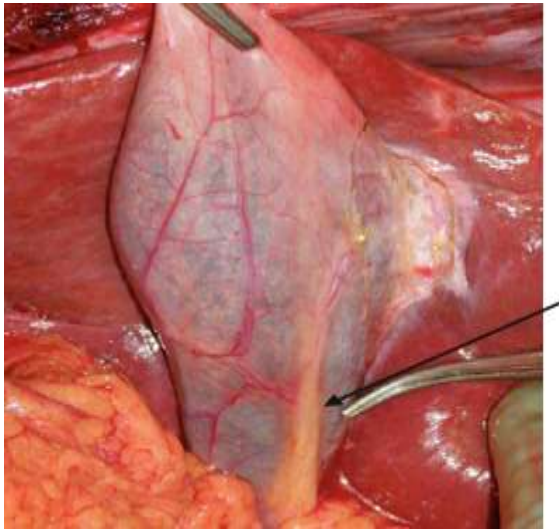
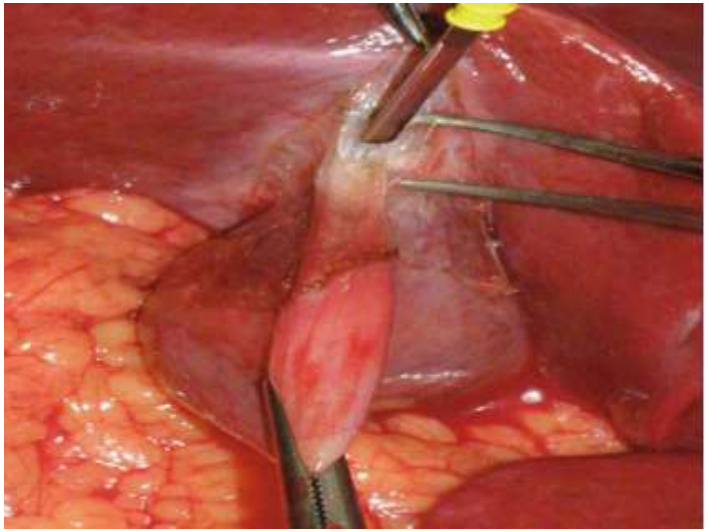
Conventional Cholecystectomy

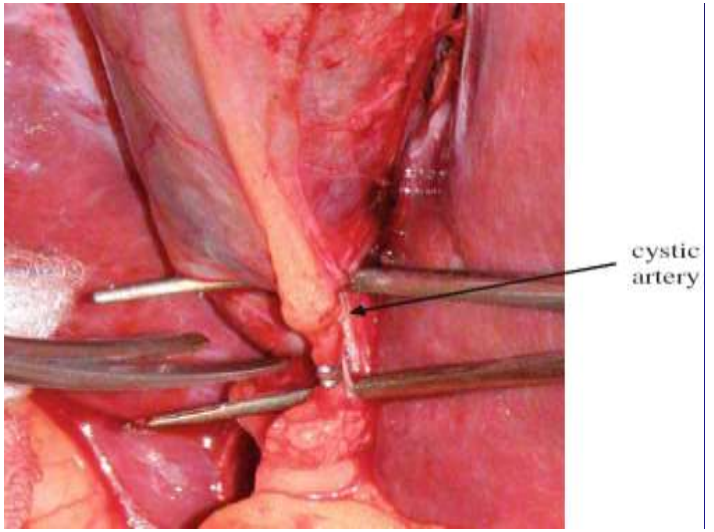


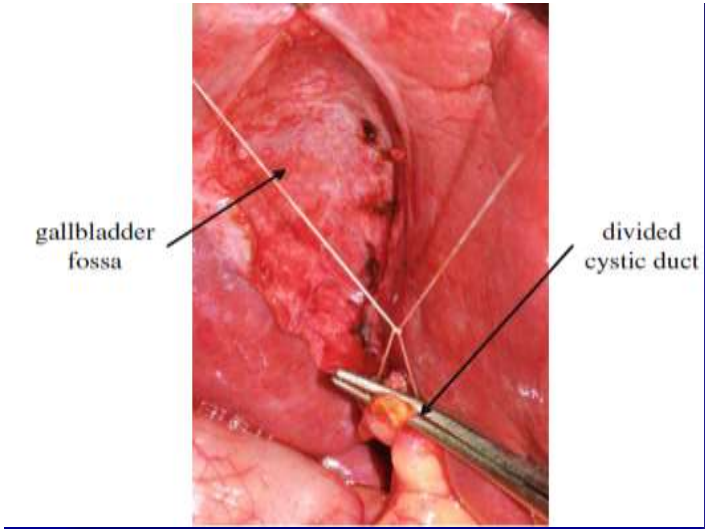

Hepatocystic Δ
RHA
LHA
CA
CD
Δ of Calot
CHD
CBD

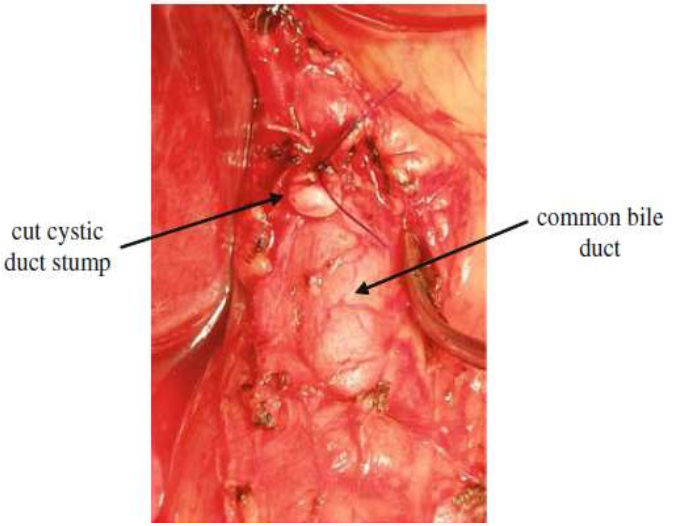


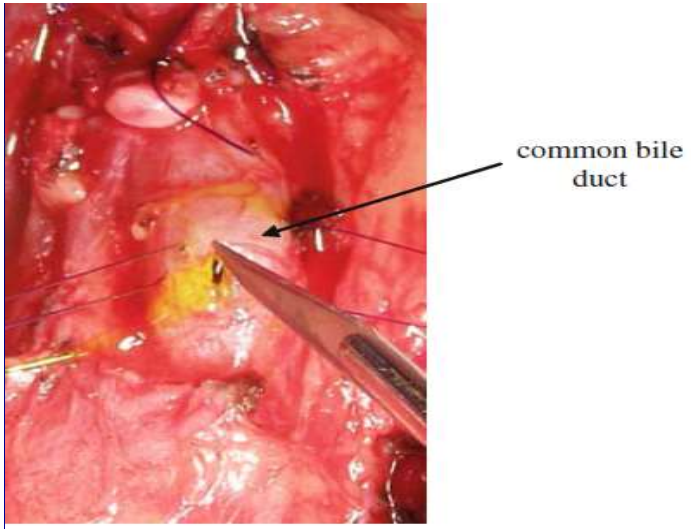

cystic
artery

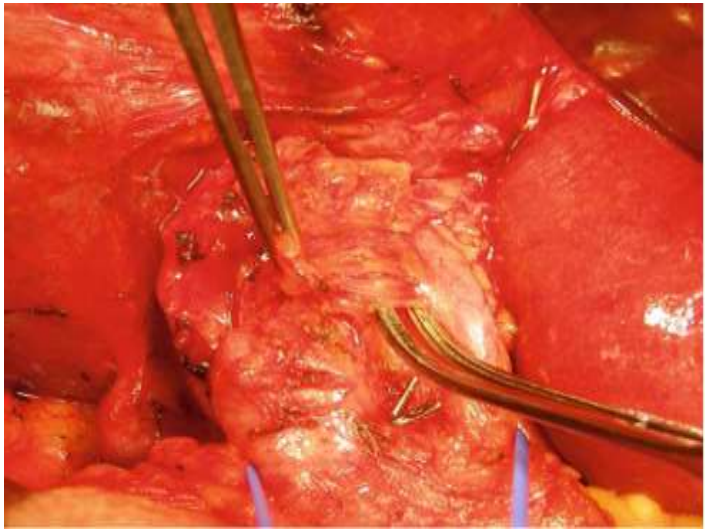



cystic
artery

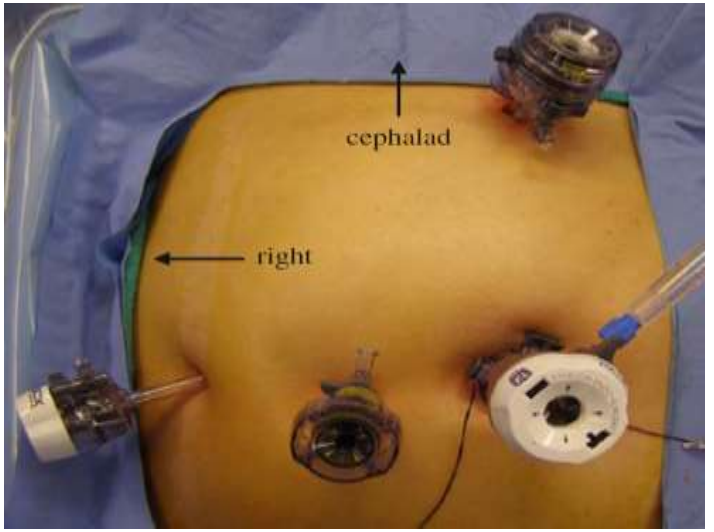

gallbladder
fossa
divided
cystic duct

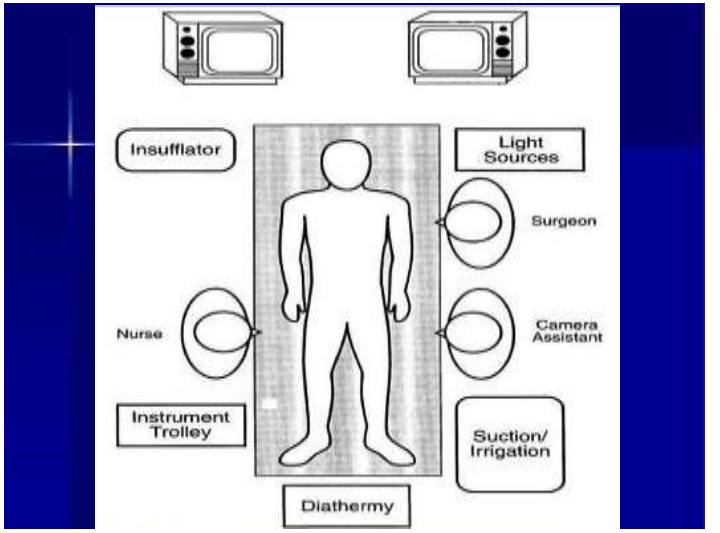

cut cystic
duct stump
common bile
duct

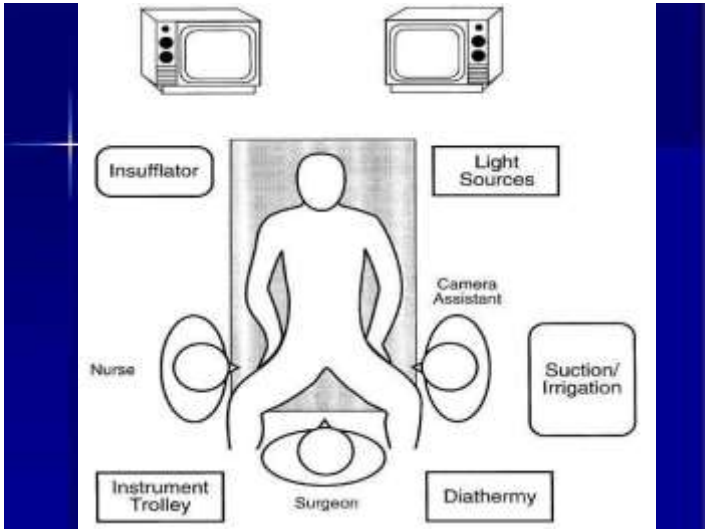




Laparoscopic Cholecystectomy




Insufflator
Light Sources
Surgeon
Nurse
Camera Assistant
Instrument Trolley
Suction/ Irrigation
Diathermy


Insufflator
Light Sources
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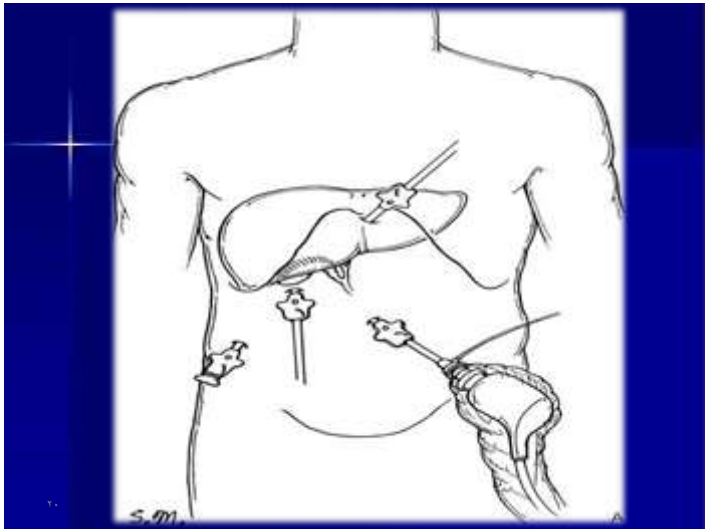
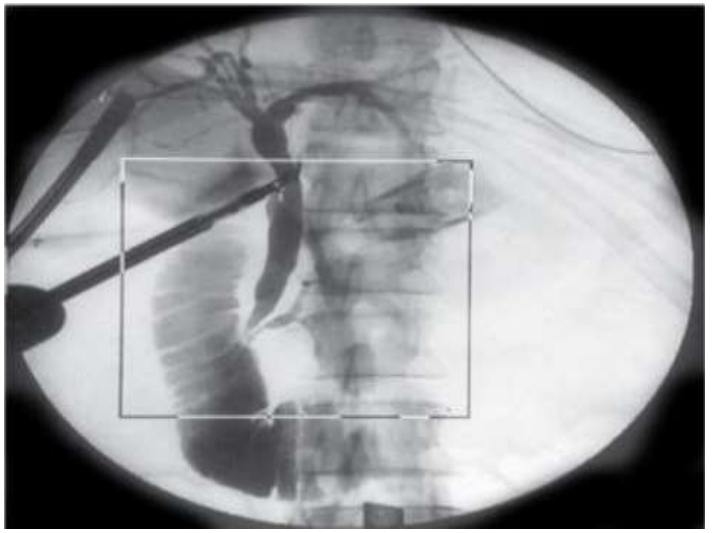
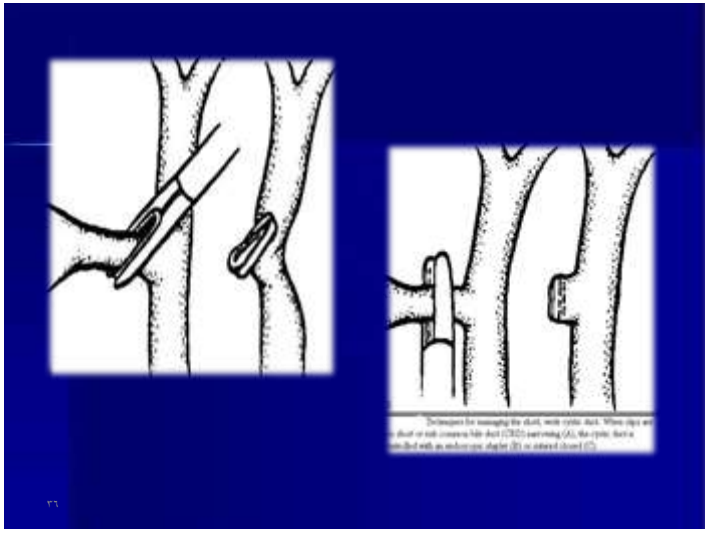
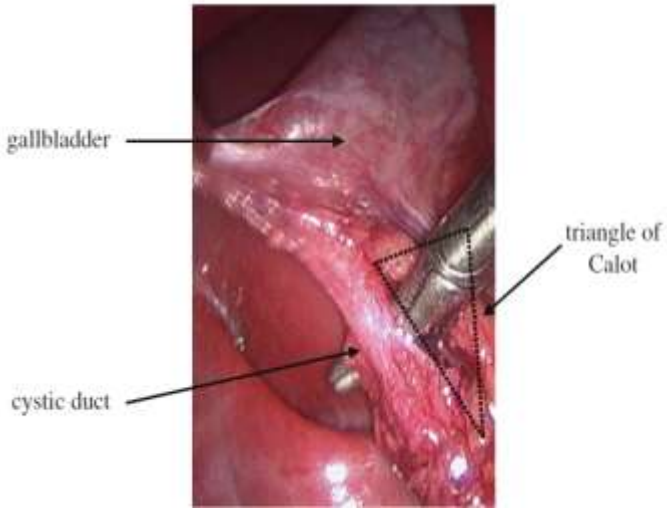
Instrument Trolley
Surgeon
Diathermy








gallbladder
triangle of Calot
cystic duct

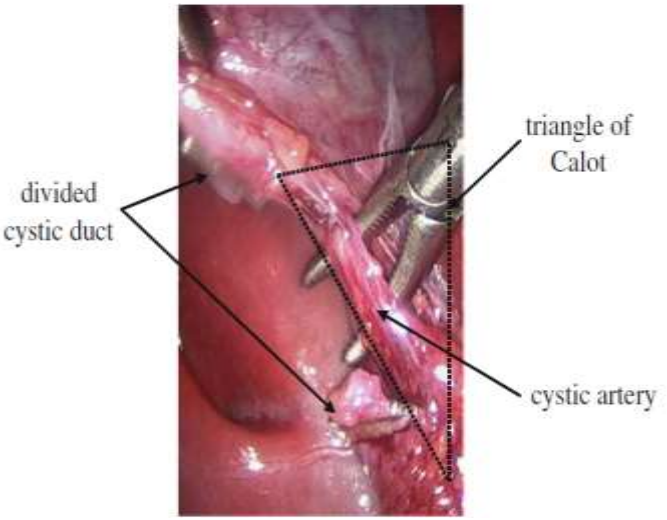
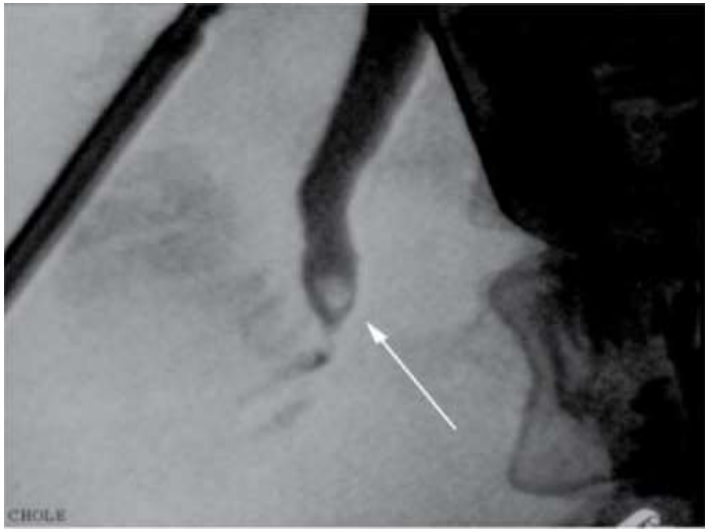
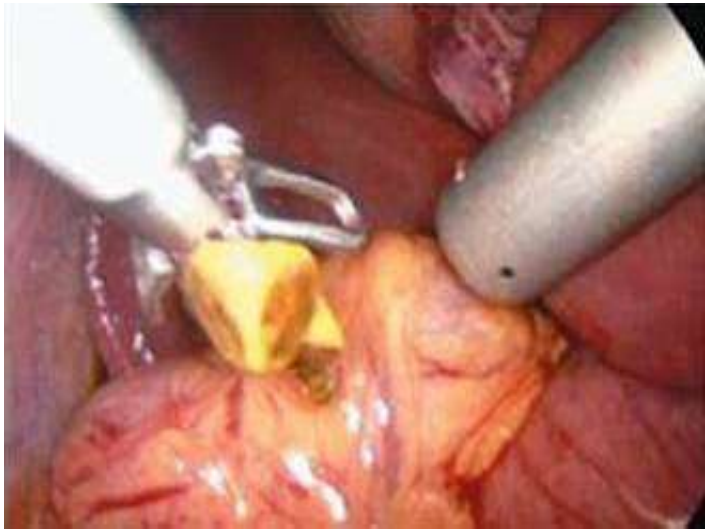

triangle of Calot
divided cystic duct
cystic artery

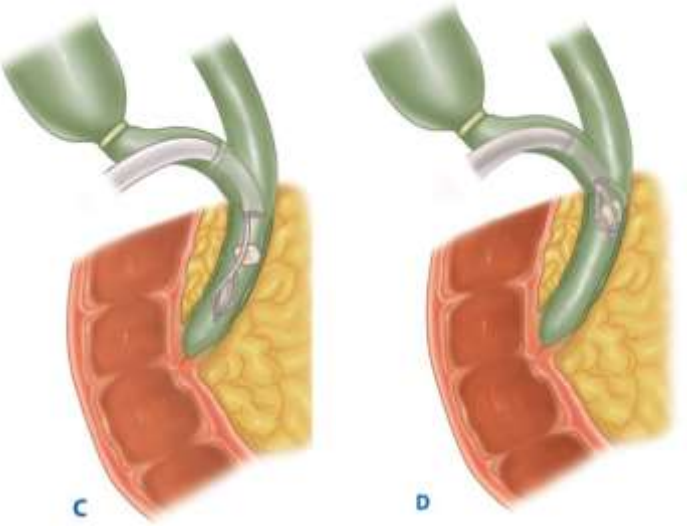
Table 20-8. Techniques to Avoid Injury during Laparoscopic Cholecystectomy
Clear, unobstructed view of the infundibulum/triangle of Calot
Firm cephalad retraction of the fundus, inferior and lateral retraction of the infundibulum
Dissect fat/areolar tissue from infundibulum toward common duct, never vice versa
Visualize absolutely the cystic duct-gallbladder junction with no other intervening tissue
Cholangiography to confirm anatomy and rule out other pathology
Accessory/anomalous ducts are rare; do not over-call
A ductal structure wider than a standard clip is the common duct until proven otherwise
Never cauterize or clip blindly to control bleeding
Irrigate as often as necessary to clear the operative field and optimize visualization
Six to eight clips are the routine maximum; the need for more should lead to conversion
Asking oneself if one should convert to open surgery probably means one should

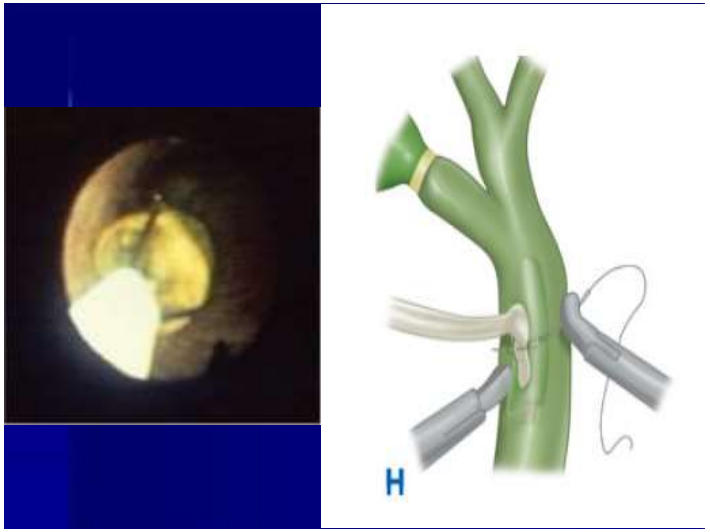
Table 32–3. Advantages and Disadvantages of LC Compared to OC	
Advantages	**Disadvantages**
Less pain	Lack of depth perception
Smaller incisions	View controlled by camera operator
Better cosmesis	More difficult to control hemorrhage
Shorter hospitalization	Decreased tactile discrimination (haptics)
Earlier return to full activity	Potential CO_2 insufflation complications
Decreased total costs	Adhesions/inflammation limit use
	Slight increase in bile duct injuries


VII
VIII
VI
V
PD


CHOLE




C
D

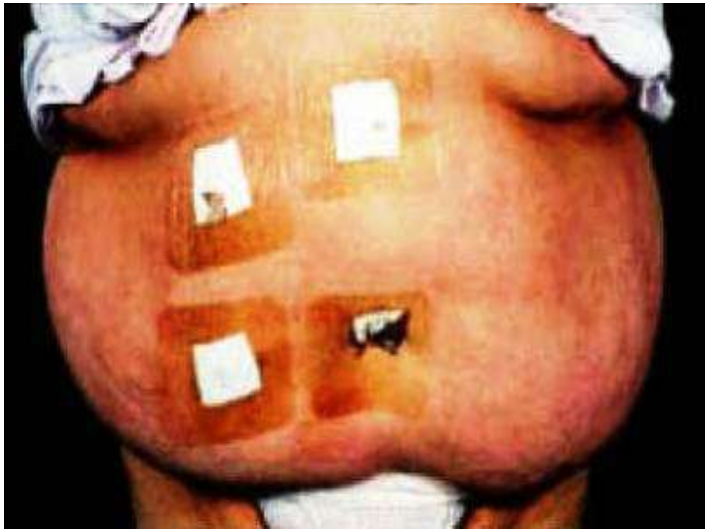

H

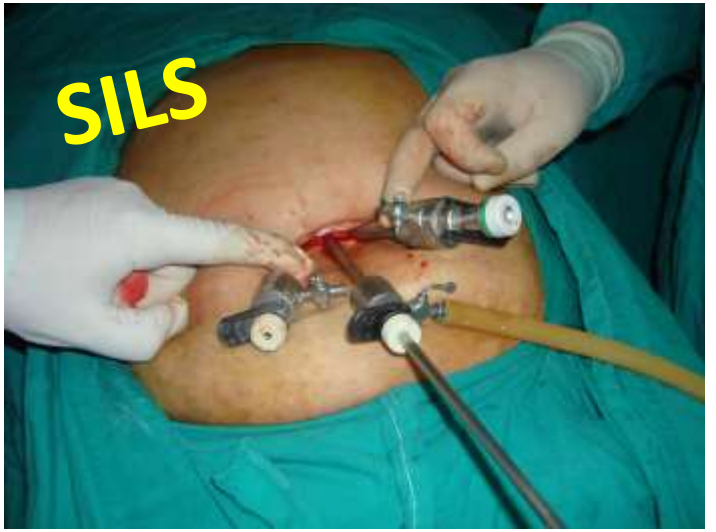

Open surgery


Open surgery


Laparoscopy

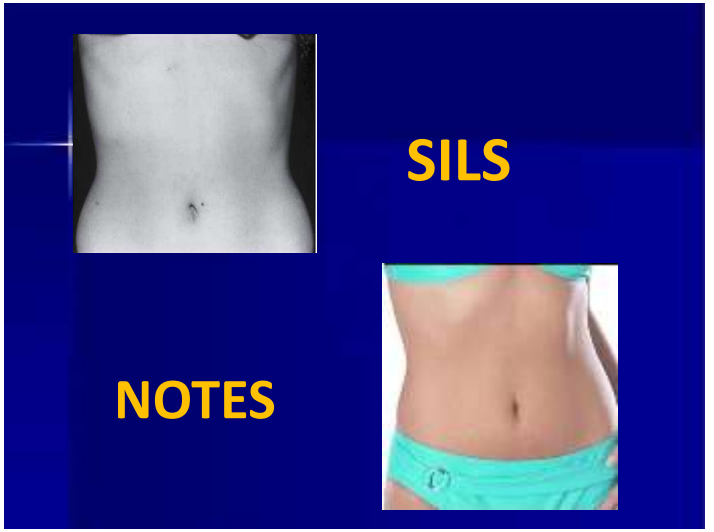

Laparoscopy




SILS


SILS


NOTES



▪ CONCLUSION

Cholecystectomy remains a common operation. Laparoscopic management of symptomatic gallstones has rapidly become the new standard for therapy throughout the world. Many patients can now undergo this operation in an ambulatory setting. There are numerous advantages of LC over OC. However, occasionally anatomical or physiological considerations will preclude the minimal access approach, and conversion to an open operation in such cases reflects sound judgment and should not be considered a complication.

Golden rules for sound cholecystectomy:

(1)- Decide the best approach, then dissect the cholecysto-hepatic triangle for good anatomical identification especially of cystic artery and duct.
(2)- Good dissection and identification of the gall bladder cystic junction prior ligation and cutting to avoid CBD injury or ligation.
(3)- Avoid clipping, ligation, or even clamping of any unidentified structure as it may ends in biliary injury.
(4)- Avoid unnecessary use of diathermy in general, and in the vicinity of CBD in particular.
(5)- Ligation of the cystic artery nearby the gall bladder wall to avoid hepatic artery injury.
(6)- Do not manipulate in myth, if in doubt consult or shift to op. cholangiogram.
(7)- Any sizable duct structure connected to the bladder in the bed should be identified then assured by cholangiogram, if accessory it is ligated to avoid post operative leak, if major duct, it must be repaired or anastomosed.

(8)- Any bile leak in the field should be taken seriously and searched for its source and managed accordingly without reluctancy.

(9)- Do not skelitonize the CBD aiming for good identification as it end almostly in its ischemic stricture.

(10)- Do not attempt to close the patient till you are extremely sure about all details, and reconsult if in doubt as most of biliary injuries discovered intra-operatively and managed run into cure in 80% of cases.

(11)- If you do not have the facility to manage complications, drain the sub-hepatic area and refer the patient immediately to the convenient center with full detailed report about the procedure without hesitancy.

(12)- CBD exploration should be attempted if in doubt about obstruction.

(13)- Choledochotomy is done in supra-duodenal CBD anterior wall with clean cut edge, without laceration of the tissues or diathermy use.

(14)- Do not use forcible testing of CBD clearance using metal dilators or scoops.

(15)- T-shaped tube application is the standard after CBD exploration, with upper end apart from the carina, and lower end above the sphincter of oddi.

(16)- Choledochotomy incision closure necessitates at least one stitch above and below T-tube external limb osteum for better closure after extraction.

(17)- Do not hesitate to open the duodenum if stone is impacted in the papilla with operative papillotomy.

(18)- Lower down CBD obstruction is not managed symptomatically with side to side choledocho-duodenostomy without good intra-operative diagnosis of its nature and subsequent biopsy if needed then managed accordingly.

(19)- Choledocho-jejunostomy, with Roux-en-Y loop end to side or side to side is the operation of choice in shunting the biliary tract to the gut with the least drawbacks.

(20)- Almost always fashion the biliary stoma as large as possible (at least 3 cm in diameter) by all possible techniques for better outcome without stricture formation later on, and splint the anastomosis in smaller caliber externally, or internally by inert silastic, or Teflon tubes.