

⑥ Dr. Elai (2) :-

Can't GBD :-

- Emphysematous cholecystitis → gas inside GB or inside GB wall.
  - ↳ GB is about to rupture
  - ↳ emergency not observation
  - ↳ leads to perforation of GB → death.

There's a gas forming organism in GB as Clostridium.  
more in DM and immunocompromised

- X-rays → Gas in GB or wall.
- Treatment → Urgent cholecystectomy.

- In America,  $\frac{1}{4}$  females and 12% ( $\frac{1}{2}$ ) of males in age of 60 have asymptomatic GB stones.

asymptomatic ← 80%    not symptomatic    20% asymptomatic    10-15%  
1-2% per year    symptomatic    20% asymptomatic    10-15%

Asymptomatic GBs → you don't need to do surgery.

stone size > 3-4 cm. ① → (التي) (التي) (التي)

porcelain GB ②

[calcification in wall]

Family hx. of GB cancer. ③



(\*) لومانيخ الـ O6 junction ← achalasia  
 (\*) ← proctalgia fugax ← anal sphincter ← contracted ← مابفتح.

- Following cholecystectomy, some patients have recurrent pain as biliary colic.

## Polyp :-

- موجود في كل الـ GIT  
 - لا يصنف polyp في الـ GB مابفتح، الا لومانيخ > 1.5cm

- الـ polyp في الـ GB دكت مثلاً 0.5cm عر مابفتح cancer مابفتح مابفتح مابفتح  
 - عادة في asymptomatic مابفتح الـ GB cancer مابفتح مابفتح  
 - دكت > 1.5cm ← minimal possibility to be cancer.  
 - مابفتح مابفتح الـ GB polyp الـ 1.5cm مابفتح

- مابفتح الـ GB بار laparoscope مابفتح مابفتح  
 ↳ 4 incisions [umbilicus - epigastric 10mm]  
 supra or infra umbilical + [2 in the Rt side 5mm]  
 مابفتح مابفتح

رين الـ ports مابفتح مابفتح مابفتح  
 - مثلاً مابفتح ← appendix مابفتح الـ sigmoid مابفتح الـ ports  
 مابفتح مابفتح الـ upper abdomen ← hiatal hernia

↳ Can be done by 3 ports not 4.

مابفتح مابفتح مابفتح الـ umbilicus مابفتح الـ working instrument مابفتح الـ assistant  
 مابفتح الـ Fundus of GB مابفتح

- Open cholecystectomy → Rt subcostal incision [Kocher incision].

ال subcortical incision في ال splenectomy

- Laprascope can also be done by a single port  $\rightarrow$  single port

عنده ما قبل 4 incisions في الجدار 6 كل الأضراس يدخلها 5 incisions واحد

12cm ~ 5.

[single port cholecystectomy].

- Subtotal cholecystectomy → anatomy مع وظائفه

الـ: cystic duct مخرج و bile duct مخرج بعض و يسمى الـ cystic duct وهذا.

دالة بيل ديك . بيب ا . *infradibulum* . ساعه صري روج (فوق) بي

أحسن من أنفسيه الى كبدك يا فلان.

↳ done in extremely difficult cases.

- Calot triangle =

Common hepatic duct  $\rightarrow$  left. side

inferior border of liver  $\rightarrow$  above.

cystic duct  $\rightarrow$  Rr side.

cystic artery → inside.

↳ crises from PR hepatic a.

↳ from common hepatic

L<sub>3</sub> from celiac trunk.

Supraumbilical incision is more dangerous than infraumbilical in

لاذیال / supraumbilical بخلاف ال / laprasupe.

6 umbilicus N above and to the left of the abdominal aorta

2 common ibac q. JK نلخا اورقا لايق اورقا inhumbral

- Conversion rate  $\rightarrow$  laparoscopic cholecystectomy  $\rightarrow$  5%  
 بياض  
 less than 5%

## Biliary tract cancer:-

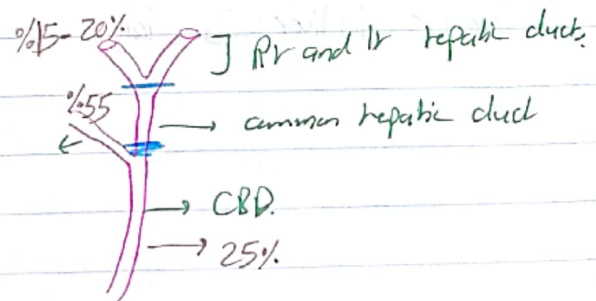
- 2 types of cancer  $\rightarrow$  GB cancer - bile duct cancer.  
 5th or 6th most common cancer of GIT.  
 [more common].  
 $\rightarrow$  cholangiocarcinoma.

65% GB cancers - 35% cancer of bile duct and perianampullary region.  
 ductum  $\rightarrow$  القناة

80% in GB cancers - 20% cancer of bile duct and perianampullary region.  
 الأنفول  $\rightarrow$

- Commonest cancer in biliary system/tree is GB cancer.  
 $\rightarrow$  GB 90% of biliary cancer.  
 GB stores bile. GB stores 3cm of bile.  
 GB stores 3cm of bile.

- Cholangio carcinoma  $\rightarrow$   
 Pr and L union  $\rightarrow$  common hepatic duct  
 R and L hepatic duct  
 cystic duct  $\rightarrow$  common hepatic duct  
 common hepatic duct  $\rightarrow$  perihilar cholangio carcinoma.  
 55%  
 15-20%  $\rightarrow$  R and L hepatic duct.  
 55%  $\rightarrow$  common hepatic duct  
 CBD  $\rightarrow$  25%  
 cystic duct



Perihilar cholangiocarcinoma → From junction between R & L hepatic ducts until union with cystic duct.  
 ↳ Commonest cancer in biliary ducts.

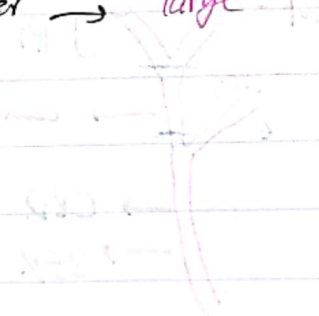
bile duct 25% distal  
 15-20% proximal  
 ↳ intrahepatic cholangiocarcinoma (smaller big)

- Most common tumor in the liver hepatocellular carcinoma.
- 2nd most common tumor in the liver. cholangiocarcinoma from intrahepatic bile ducts.

less biliary cancer of GB cancer signs & symptom 25%  
 ut. loss (90%)

- GB cancer and cholangiocarcinoma are bad tumors.
- ↳ inferior GB 5% only  
 surface or visceral surface of liver  
 direct spread of GB cancer into the liver  
 GB. N. Pharynx, N. Abdomen, into the liver  
 liver = 3mm tumor  
 very bad prognosis

- Tumor in liver → large if small bile duct  
 bile duct.



⊗ So, GB cancer → 90% have GB stones, more in females.  
GB stones → F:M =  $\boxed{9:1}$   
 $\boxed{3:1}$  cancer ACS

⊗ porcelain GB - sclerosing cholangitis are risk factors for GB cancer.

- Diagnosed by US or CT.
- represents 70-80% of biliary cancers
- 20-25% are cholangiocarcinoma
- very bad prognosis.
- metastasize to liver.

↳ Due to direct extension into the liver  
3mm vessel thickness (wall)

- **Klatskin tumors** = tumor in common hepatic duct. / perihilar cholangio carcinoma.

- has 5 types.

- ↳ type 1 → in CBD.
- ↳ type 2 → involving bifurcation between R and L hepatic ducts.
- ↳ type 3a → at R hepatic duct.
- ↳ type 3b → at L hepatic duct.
- ↳ type 4 → both R and L hepatic ducts.
- ↳ type 5 → multicentric or multifocal.

- 55% of cholangiocarcinomas.