BILIARY TRACT CANCERS

1. Intrahepatic cholangioCa (iCCA): biliary tree within liver
2. Extrahepatic cholangioCa (eCCA): biliary tree outside liver= perihilar/Klatskin (pCCA) + distal cholangiocarcinoma (dCCA)
3. Gallbladder cancer (GBC)

GBC 60%; 40% CholangioCa

GB POLYPS

(a)**Single:** pre-malignant; risk =**size (1cm)/sessile/age>50/indian**/PSC
(b)**Multiple:** cholesterosclerosis (no further significance)
No polyp-carcinoma sequence
Features: asymptomatic/symptoms if impact in Hartmann's pouch
Management (i)Surveillance: (a) 6-9mm= US 6mthly for 1 yr then 5yrly (b)<5mm w/ risk factors @ 1, 3, 5yrs
(ii)Surgery: symptoms/size (10mm)

GB CARCINOMA

Epidemiology: 90% female/Andes and Indians
Aetiology: (i)stones$^{90\%}$ (ii)porcelain GB (iii)polyposis (iv) adenomyomatosis (v)PSC (vi)cong malfs (vii)obesity (viii)chronic infection
Micro: 90% adenoca||10% SqCC
Site: 60% fundus||40% neck
Spread: local= liver/porta hepatis/HPV/duodenum/colon||nodes= porta hepatis|| mets= liver
Features: (i)biliary obstruction (ii)constitutionals of cancer
Investigations: US/CT/MRI **histological diagnosis unnecessary if conclusive imaging**
Management: 30% resectable
Scenarios (i)Pre-op suspicion → MDT → ?resection ||?cholecystectomy + CD frozen section +/- proceed
(ii)Intra-op finding → frozen section for T stage and resect →TNM staging and MDT →may have to re-operate
(iii)Post-op histo diagnosis: CTTAP for TNM staging → MDT → ?resection$_{\text{+/- port sites (no bag, perf)}}$

1. Local disease:

(a)Segment IVb/V resection(b)ligament lymphadenectomy (after cholecystectomy with CD frozen section positive)
(i)Incidental= High grade/T1b+/LN+/EMVI/CD margin need reoperation||port site resection if perf'd/not removed in bag
(ii)Symptomatic tumour: Fundus→liver + TV colon resection||Neck→bile duct+duodenal bulb+panc head+hepatectomy
Contraindications: distant nodal mets/distant mets/biliary involvement/vascular involvement/T4

2. Unresectable disease (palliation)

5 mths median survival → non-surgical (ERCP/PTC) ?Sg3 bypass only if discovered intra-op

Outcomes:

Median survival 12 mths; 5% 5yr survival if treated

CHOLANGIOCARCINOMA

Epidemiology:

Men/50+/PSC/areas of endemic liver fluke infection
Screening: only at risk populations eg PSC

Pathology:

Aetiology: associated with UC (esp if PSC); choledochal cyst; flukes; BDI, chronic BD stone
Micro: **90% adenoca** 10% SqC
Macro: mass-forming arterially-enhancing tumour on scan
Site: (i)Intrahepatic (ii)Perihilar/Klatskin (iii)Distal

Clinical features:

Symptoms: (i)Obstructive: **painless progressive jaundice** (ii)Constitutionals
Signs: (i)Obstructive jaundice(intermittent if distal) (ii)GB palpable (impalpable if prox) (iii)Portal HTN if PV involved

Investigations:

1. MRCP before biliary intervention; ERCP and biopsies/cytology; LFTs (higher in malig than stones); CT: PV/bili obstn
biopsy for histological confirmation not mandatory pre-curative surgery: can have false -ives
no role for FDG-PET: false +ive if inflammatory conditions

2. Staging (TNM): (i)MRCP(T-stage/bile duct involvement) (ii)EUS(small tumours/nodal stage) (iii)CT(vascular involvement) (iv)CT thorax(staging)
ERCP/PTC with biopsies/brush cytology if inconclusive imaging

Resectability: Bismuth-Corlette type I (below confluence) II (confluence) IIIa/b (CHD+R/L) IV (confluence +R+L+segmentals)
Based on (i)biiary tree extent (ii)vascular invasion (ii)hepatic lobar atrophy (implies PV involvement) (iv) metastatic disease

Differential (i)Benign stricture (ii)Other cancer (GBC/lymphoma)

PRE-OP BILIARY DECOMPRESSION

PTC preferred to ERCP (evaluation of intrahepatic biliary tree)
Imaging of pCCA before biliary decompression if jaundiced

LOCAL DISEASE (CURATIVE RESECTION)

Objective= R0 curative resection with negative margins + biliary-enteric continuity
1. ICCA: radical resection + hepatoduodenal lymphadenectomy
2. Perihilar/Klatskin: partial hepatectomy + segment I (drains into ductal bifurcation) + porta hepatis lymphadenectomy
3. Distal: Pancreatic head (PDP) + extended bile duct resection to hilum + lymphadadenectomy

ADJUVANT TREATMENT

Considered due to high local/distant recurrence: **DXT with concurrent 5-FU/capecitabine**

ADVANCED DISEASE /METASTATIC DISEASE (PALLIATIVE CARE)

Histological/cytological confirmation essential (EUS; CT-biopsy if already metastatic)
CHEMO:**PS1= combo cisplatin/gemcitabine PS2= gemcitabine monotherapy**
SECOND-LINE: consider **fluoropyrimidine**-based therapy
DXT/CRT have unclear role so CHEMO is treatment of choice

BEST SUPPORTIVE CARE

Biliary drainage is main objective: ERCP distal /PTC prox + stent (don't do through atrophic lobe)
Use if (i)unresectable (ii)unfit (comorbs/CLD/portal HTN)
Indications: (i)intractable pruritis (ii) recurrent cholangitis (iii)access for luminal DXT (iv) hepatic recovery for chemo