The hot gallbladder
What could possibly go wrong?

Simon Dexter
Hot gallbladder?

• Cholecystectomy during acute admission
  – Acute cholecystitis
  – Gallstone related pain – non resolving
  – Post mild acute pancreatitis
AUGIS guidelines 2015

Acute Cholecystitis
- Persistent pain >24h
- +/- systemic inflammatory features

Resuscitation
- Antibiotics
- NSAIDs

Emergency LC
- Within 72 hours

Failure to improve and unfit for surgery

Percutaneous Cholecystostomy
Abnormal LFTs +/- dilated duct
Best practice
(AUGIS 2015, NICE 2014)

• Early US confirmation
• Acute cholecystectomy <72 hours (1 week)
• Laparoscopic approach
• (Percutaneous cholecystostomy)
• Appropriately experienced surgeons
• IOC + LCBDE where appropriate
• MRCP only for high CBD stone risk
Reality

- Delayed USS
- Long waits for theatre
- Repeated starving for theatre
- Defensive investigations – further waits
- Repeated handovers from team to team
- Difficult inflamed gallbladders
- Unnecessary septic complications
- Readmissions for recurrent biliary disease
SWORD dataset
Acute cholecystectomy
% completed laparoscopically
What could go wrong before surgery?

• Handover issues
• Change in clinical picture
• Recurrent biliary complication (discharged pts)

• Responsibility lies with operating team
  – Patient id
  – Investigations
  – Reassess clinical picture
  – Preparation for theatre
  – Appropriate consent
  – WHO checks
So what could go wrong during surgery?

- Access injury
- Bleeding
- Bile duct / hilar injury
- Visceral injury
Access injury

- Usually technique
- Patient factors
  - Scars
  - Intra-abdominal adhesions
  - Thin abdomen

- Visceral injury
  - Recognise and repair
  - Beware kebab

- Vascular injury
  - Recognise
  - Avoid delay
  - Control
  - Help
Bleeding

- Anticipate and reduce risk
  - Clotting function
  - ? Defer if dual antiplatelets / warfarin
  - Cirrhotic liver
- Avoid dissection into liver
- Close GB dissection
- Avoid hilum
- Good suction, swabs, haemostats
- Convert if uncontrolled
Bile duct injury

- Obscured anatomy
- Loss of planes
- Mirrizzi syndrome

- USUALLY misidentification
Underestimation of risk

• Early in career
  • Unaware of risk
  • Underdeveloped skill, surgical and interpretational

• Later in career
  • Lack of focus
  • This wont happen to me
Frequency of Use of Intraoperative Cholangiography (IOC) by Surgeons and the Rate of Common Bile Duct Injury (CBD)

Flum, D. R. et al. JAMA 2003;289:1639-1644
Fig 3 Survival in patients with iatrogenic bile duct injury during cholecystectomy, according to use of intraoperative cholangiography (IOC).

<table>
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<th>IOC</th>
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<td><strong>60 months</strong></td>
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Törnqvist B et al. BMJ 2012;345:bmj.e6457
Too treacherous?

• Drain
• Cholecystostomy
• Partial cholecystectomy
• Subtotal cholecystectomy
Going forward...
And what about after surgery?

- **Event**
  - Sepsis
  - Bile leak
  - Retained stone
  - Bleed
  - Pancreatitis
  - Thromboembolism

- **Operative strategy**
  - AB’s
  - Remove spilled stones
  - Washout
  - Drain
  - IOC
  - Haemostasis
  - DVT prophylaxis
Tips in acute cholecystectomy (GT)

Preparation for every case

Mental
Visualise the end product
Be aware of risks
Have a clear plan
Be prepared to call for help / convert

Good quality equipment