TRANSHEPATIC PERCUTANEOUS CHOLECYSTOSTOMY

Definitive Treatment of Acute Cholecystitis: Cholecystectomy

- Mortality of emergent cholecystectomy in elderly, critically ill patients is up to 30%; and up to 40% post op in patients with acalculus cholecystitis[3]; Israeli study estimated mortality of operation in the elderly with no renal failure to be 10%[1]
- Initial treatment with IV antibiotics including gram negative and anaerobic coverage, in addition to bowel rest, IV fluids
- Controversial timing of cholecystectomy: early (first 24-48 hrs) vs. late (2-3 months after acute episode); suggestion of significantly increased rate of CBD injuries during laparoscopic cholecystectomy during early stage [2]
- Elective cholecystectomy mortality estimated at 1-2%[2]

Cholecystostomy: Procedure

- Transhepatic needle placement into GB, bile aspirated; potential for diagnostic cholecytography to determine presence of stones; then Seldinger technique to place pigtail catheter
- Goal to decompress acutely inflamed GB
- Mortality of cholecystostomy in same population reported to be 0-4%[2]

Indications

- Acalculus cholecystitis: urgent cholecystectomy is definitive treatment, but few of these patients are fit for surgery
- Patients with acute cholecystitis unresponsive to medical therapy and with high operative risk
- Clinical evidence of both calculus and acalculus cholecystitis (exam, radiographic findings) in patients with severe comorbidities (either acute severe problems such as shock, DIC, ARF, respiratory distress/pneumonia (20-30% approximately) or chronic severe underlying diseases such as bedridden state CHF, prior MI, COPD (70-80% approximately)

Results

- Cholecystostomy resolves inflammation in approx. 90% of patients
- Israeli prospective study: 55 patients, 58% improved within 24 hours, 95% within 72 hours
- Japan retrospective study: 38 patients, 95% improved within 24 hours; 1 patient who underwent emergent laparotomy 18 hrs after drainage for persistent peritonitis; 1 patient who died from biliary sepsis 3 weeks after drain placement
- Boston retrospective study: 112 patients, 86% patients with localized symptoms improve; one death from bile leak

Complications

- Failure of improvement within first 24 hours is indication for laparotomy; usually the result of gangrene of the gallbladder, perforation, or misdiagnosis.
- Hepatic bleeding requiring surgical intervention; catheter dislodging; bile leak (mortality in Boston paper)
- Gangrenous gall bladder in patients with acalculous cholecystitis: might be missed

Definitive Treatment

- Interval laparoscopic cholecystectomy 2-3 months after acute attack
- Israeli study showed 60% of patient went for interval laparoscopic cholecystectomy, and 14% of these were converted to open, compared to 1.9% conversion rate in other elective laparoscopic cholecystectomies
- 2/3 patients remain asymptomatic up to 1 year post; 1/3 with recurrent cholecystitis 1-7 months after tube removed [2]
- Acalculus cholecystitis does not usually recur after cholecystostomy
- Elderly or debilitated patients can have interval percutaneous stone extraction through cholecystostomy tube

References

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