PANCREATITIS

Epidemiology:

- 8.3 - 19.5 /100,000
- 180.000 cases of acute pancreatitis in the US/year
    - 60% gallstone pancreatitis
    - 25% necrotizing pancreatitis
- Age: 50-60

Etiology:

- Gallstones
- alcohol abuse
- hyperlipidemia
- trauma
- ERCP
- Drugs
- Idiopathic
- Infection
- ischemia.

History:

- Epigastric pain
- Nausea and/or vomiting
- Fever

Physical:

- Abdominal tenderness, distension, guarding
- Mild jaundice
- Tachycardia, Tachypnea, Hypotension, Fever
- Grey Turner sign
- Cullen sign

Diagnosis:

- Labs
- AXR
- US: 99 % specific, 70% sensitive
- CT: gold standard

CT Findings and Grading of Acute Pancreatitis (CT Severity Index [CTSI])†

Grading based upon findings on unenhanced CT

Grade	Findings	Score
A	Normal pancreas — normal size, sharply defined, smooth contour, homogeneous enhancement, retroperitoneal peripancreatic fat without enhancement	0
B	Focal or diffuse enlargement of the pancreas, contour may show irregularity, enhancement may be inhomogeneous but there is on peripancreatic inflammation	1
C	Peripancreatic inflammation with intrinsic pancreatic abnormalities	2
D	Intrapancreatic or extrapancreatic fluid collections	3
E	Two or more large collections of gas in the pancreas or retroperitoneum	4

Necrosis score based upon contrast enhanced CT

Necrosis, %	Score
0	0
<33	2
33-50	4
≥50	6

CT severity index equals unenhanced CT score plus necrosis score: maximum = 10, ≥6 = severe disease

†Adapted from Balthazar, EJ, Robinson, DL, Megibow, AJ, Ranson, JH, Radiology 1990; 174:331.

The criteria for diagnosis are divided by Balthazar and colleagues into 5 grades

- ERCP:
  - Gold standard to diagnose choledocholithiasis
  - Combination with sphincterotomy
  - May exacerbate pancreatitis
- MRCP

Treatment:

- Surgical/Conservative
  - bowel rest
  - IV fluids
  - Antibiotics
    - Imipenem
    - 3rd generation cephalosporin

Prognosis of acute attack:
10% of cases are severe, progressing to pancreatic necrosis/sepsis/death

- Ranson's Criteria

TABLE 53-1 -- Ranson's Prognostic Signs	
Admission	**Initial 48 Hours**
Gallstone Pancreatitis	
Age > 70 yr	Hct fall > 10
WBC > 18,000/mm^3	BUN elevation > 2 mg/100 mL
Glucose > 220 mg/100 mL	Ca^{2+} > 8 mg/100 mL
LDH > 40 IU/L	Base deficit > 5 mEq/L
AST > 250 U/100 mL	Fluid sequestration > 4 L
Non-Gallstone Pancreatitis	
Age > 55 yr	Hct fall > 10
WBC > 16,000/mm^3	BUN elevation > 5 mg/100 mL
Glucose > 200 mg/100 mL	Ca^{2+} > 8 mg/100 mL
LDH > 350 IU/L	PaO_2 > 55 mm Hg
AST > 250 U/100 mL	Base deficit > 4 mEq/L
	Fluid sequestration > 6 L

  - < 3: mortality rate < 1%
  - 3-4: mortality rate 15%
  - 5-6: mortality rate up to 90 %

- Glasgow Scale
- APACHE II (Acute Physiology Score And Chronic Heath Evaluation)
  - Score>8 denotes severe acute pancreatitis

Gallstone pancreatitis:
- 40-60%% of all cases of acute pancreatitis
- 75% of all cases involve women
- by stone impaction at the ampulla of Vater → increase pressure
- Amylase and Lipase levels do not predict severity or outcome
- **Role of early ERCP?**
  - Controversial if ERCP is necessary in all cases of gallstone pancreatitis.
  - Early ERCP (within 24 - 72hours) should only be performed in cases of severe acute gallstone.
- **Role and timing of cholecystectomy in patients with gallstone pancreatitis?**

Necrotizing pancreatitis:

- 20-30% of all cases of acute pancreatitis
- High morbidity/mortality (82%/10%)
- CT accuracy >90%
- 30-70% develop local pancreatic infection
- Surgery:
    - Necrosectomy with closed packing
    - Necrosectomy with open packing
    - Necrosectomy with closed continuous lavage of the retroperitoneum
- Complications:
    - Recurrence
    - Fistula
    - pancreatic insufficiency
    - obstruction
    - hemorrhage

Pancreatic pseudocysts:

- Single: 90%, multiple: 10%)
- 2-30 cm
- US: 75% - 90% sensitive
- CT: 90 - 100% sensitive
- Indication for surgery:
    - increase size
    - complications
    - symptomatic
    - infected cyst
- Surgery:
    - Percutaneous drainage
    - Endoscopic drainage
    - Surgical intervention : ext/internal drainage
        - cystgastrostomy
        - cystduodenostomy
        - cystjejunostomy
- Complications:
    - Rupture
    - Infection
    - Ascites
    - Jaundice
    - Obstruction
    - pseudoaneurysm

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March 30, 2006