Pancreatitis

Objectives

- Define acute and chronic pancreatitis
- Etiology
- Signs and symptoms
- Diagnosis
- Treatments
- Complications

Acute Pancreatitis

- Diffuse inflammation
- Enzymatic destruction
- Interstitial edema and inflammation
- Hemorrhage and necrosis

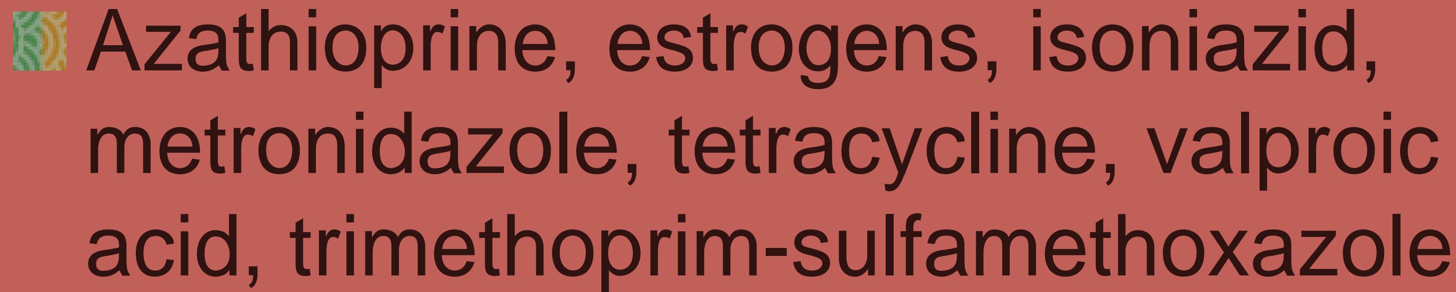
A.D.A.M.

CT-scan of acute pancreatitis

Etiology Acute Pancreatitis

- Alcohol
- Biliary tract disease
- Hyperlipidemia
- Hereditary
- Hypercalcemia
- Trauma
- Ischemia, infections, venom

Etiology



- Azathioprine, estrogens, isoniazid, metronidazole, tetracycline, valproic acid, trimethoprim-sulfamethoxazole

Clinical Presentation

- Noncrampy, epigastric abdominal pain
- “knifing” or “boring through” to the back
- Nausea and vomiting
- Tachycardia, tachypnea, hypotension, hyperthermia
- Voluntary and involuntary guarding

What is this? Why?

Cullen's Sign

- Hemorrhagic pancreatitis
- Blood dissects up the falciform ligament

What is this? Why?

Grey Turner's Sign

- Hemorrhagic pancreatitis
- Blood dissect into the posterior retroperitoneal soft tissue in the flank

Fox's Sign

- Rare finding
- Bluish discoloration below the inguinal ligament or at the base of the penis.

Tests

- labs- amylase and lipase
- CT scan
- CXR-elevation of left diaphragm
- AXR- sentinal loop sign

  -colon cutoff sign

Early Prognostic Signs

- Ranson's prognostic signs of pancreatitis
- Criteria for acute gallstone pancreatitis

Ranson's

At admission

: Age >55y

WBC >16,000/mm3

Blood glucose >200 mg/dl

LDH >350 IU/L

AST >250 U/dl

Ranson's

Initial 48 hours

Hct fall >10%

BUN elevation> 5 mg/dl

Serum Calcium<8 mg/dl

Pao2< 60 mmHg

Base deficit >4 mEq/l

Fluid sequestration > 6 L

Acute Gallstone Pancreatitis

At admission:

Age > 70y

WBC >18,000

Blood glucose > 220

LDH > 400

AST >250

Acute Gallstone Pancreatitis

Initial 48 h

HCT fall > 10%

BUN elevation > 2

Calcium < 8

Base deficit > 5

Fluid sequestration > 4 L

Prognosis

- Mortality zero; less than 2 criteria
- Mortality 10% to 20%; 3 to 5 criteria
- Mortality > 50%; more than 7

Treatment Mild Pancreatitis

- Supportive
- Restriction of oral intake
- NGT
- H2 blockers
- Pain control

When Resume Diet?

- After ABD pain has decreased
- Amylase returns to normal
- Diet: low-fat and low-protein

Severe Pancreatits

- NPO
- Supportive care in the ICU
- Aggressive fluid resus.
- TPN

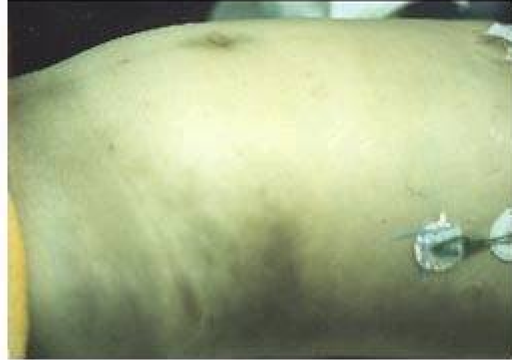
Complications

- Paralytic ileus
- Hyperglycemia
- Hypocalcemia
- Renal failure
- Hemorrhage-erosion into a major vessel

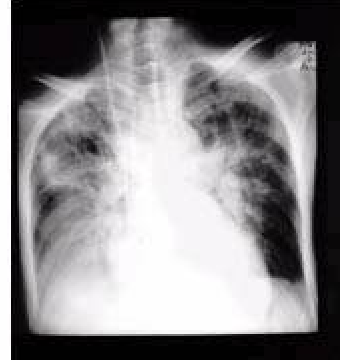
Complications

- Necrosis
- Infected necrosis
- Abscess
- Pseudocyst
- Thrombosis of splenic vein- sinistral portal hypertension and gastric varices

Acute Necrotizing Pancreatitis 急性壊死性膵炎

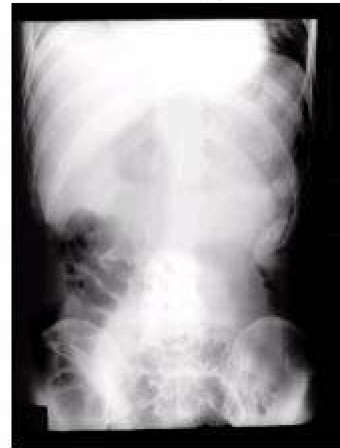


Cullen's sign (periumbilical hemorrhage)
Gray-Turner's sign (flank hemorrhage)



chest X-P showing ARDS

resected specimen showing the necrotic pancreas



abdominal X-P with colon "cut-off"

infected peripancreatic necrotic tissues removed during drainage surgery

open drainage and respiratory control
The patient survived!

Chronic Pancreatitis

- Chronic inflammatory condition
- Fibrosis, duct ectasis and acinar atrophy
- Irreversible destruction of tissue

Etiology of Chronic Pancreatitis

- Alcohol 70%
- Idiopathic
- Herditary hyperparathyroidism
- Hypertriglyceridemia
- Autoimmune
- Obstruction , trauma
- Pancreas divisum

Presentation

- Chronic pain- epigastric radiates to back
- Anorexia
- Weight loss
- IDDM
- Steatorrhea

Diagnosis

- Pancreatic calcifications

- Chain of lakes

A.D.A.M.

CT scan of chronic pancreatitis

EXTENSIVE PANCREATIC CALCIFICATION

Treatment

- Control pain
- Small-volume, frequent, low-fat, high-protein, high-carbohydrate meals.
- Octreotide
- Lipase and trypsin
- ERCP with stents, sphincterotomy, stone extraction

Treatment Operative

- Sphincteroplasty
- Peustow- side-to-side longitudinal pancreasticojejunostomy
- Celiac plexus neurolysis with alcolhol injection
- Thoracoscopic splanchnicectomy

R

SH

Se: 2
XY I105.5
Im: 67+C
DFOV 36.0cm
STND/+
DOB: 1928 Jul 07
02 Aug 03
512
R
182
L
168
kV 120
mA 220~
Smart mA 196
Large