Classic case: 5yo overweight miniature schnauzer with anorexia, vomiting, and weakness

Presentation:
Risk factors
- Miniature schnauzers (poster dog for pancreatitis)
- Middle-aged to older
- Overweight
- Dietary indiscretion (FATTY FOODS, got into garbage)
- Pancreatic hypoperfusion (shock, hypotension secondary to general anesthesia)
- Blunt abdominal trauma
- Pharmaceuticals – KBr, phenobarb, TMS
- Severe hypertriglyceridemia
- Infections – viral, mycoplasma, parasitic (babesiosis)

Clinical signs
- Anorexia, vomiting, weakness
- Abdominal pain (prayer position), dehydration, fever
- +/- diarrhea, icterus, shock

Classifications
- Acute pancreatitis – MOST COMMON, reversible
- Chronic – long-standing inflammation, permanent damage

DDX:
GI obstruction, FB, gastroenteritis, ulcers, pyometra, pyelonephritis

Test(s) of choice:

cPL (canine pancreatic lipase)
- SNAP test – patient side test
  - Rule in or out pancreatitis
  - Must confirm positive test with Spec assay
  - If negative look at other DDx

Spec cPL Assay
- TEST OF CHOICE
  - Highly specific and sensitive
  - Does not assess severity
  - Monitor disease progression
Canine pancreatitis

Test(s) of choice: (continued)

- **Abdominal ultrasound**  Highly specific for diagnosing pancreatitis
  - Enlarged hypoechoic pancreas
  - Peripancreatic fluid accumulation
  - Pancreatic mass effect
  - Hyperechoic peripancreatic fat
  - Dilated pancreatic duct

**Chronic cases**
- 18 hour serum triglyceride concentration test to rule out hyperlipidemia
- Monitor serum Ca$^{++}$
- Monitor cPL

**Acute cases**
- Monitor CBC, chemistries, cPL, coagulation panel

Rx of choice:
**ACUTE pancreatitis:** IV fluids and supportive care

- Treat inciting cause if known
  - Discontinue medications if known risk factor
- Aggressive fluid therapy
  - Isotonic crystalloid fluids IV
- Monitor labwork
  - Monitor and treat for **hypokalemia** (2° to vomiting)
  - Monitor BUN & Cr
- Analgesia
  - Treat pain even if clinical signs are not apparent
  - Buprenorphine or fentanyl CRI
- Antiemetic
  - 5-HT3 serotonin receptor antagonist (Dolastetron, Ondanestron)
  - NK1 receptor antagonist (Maropitant)
  - Metoclopramide is contraindicated – decreases pancreatic perfusion
- **Plasma transfusions**
  - May be LIFE-SAVING in dogs with severe pancreatitis
  - Replaces macroglobulins, clotting factors
  - Maintains albumin concentration
- **Antibiotics**
  - **Not** necessary unless concurrent infection
Canine pancreatitis
Extended Version

Rx of choice: (continued)
- Nutritional support
  - Enteral nutrition preferred over parenteral unless incessant vomiting
  - If incessant vomiting
    - Total or partial parenteral nutrition
    - Feed via jejunostomy tube (placed surgically or via endoscope)
  - Once vomiting subsides or if not vomiting
    - Introduce small amounts of water
    - Gradually reintroduce food
      - High carbohydrate content (rice, pasta, potato)
      - Ultra low-fat
  - Observe for and treat common sequelae
    - Extrahepatic biliary obstruction, DIC, thrombocytopenia, acute renal failure, pleural effusion, pulmonary embolism, peritonitis, myocarditis, pancreatic necrosis, pancreatic pseudocyst, pancreatic abscess

CHRONIC pancreatitis
- Permanent ultra low-fat diet
- Avoid high-fat treats
- Antioxidant supplements

Prognosis:
Good: mild pancreatitis without pancreatic or systemic complications
Poor to grave: severe pancreatitis with pancreatic +/- systemic complications

Prevention:
Avoid high-fat foods and treats
Eliminate risk factors, especially in high risk dogs

Pearls:
NPO no longer standard therapy for dogs w pancreatitis unless vomiting is uncontrollable

Refs: Cote, Clin Vet Advisor, Dog and Cat. 2nd ed. pp. 820-22, Merck Vet Manual 10th ed (online), Pancreatitis in small animals

My Notes: