Zuku Review FlashNotes™

Canine pancreatitis

Extended Version

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)

Miniature schnauzer, poster-dog for pancreatitis,
photo courtesy, Adam Bostock

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

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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

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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 abcess

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: