Intro: Pancreatitis is an inflammatory process of the pancreas that can be either acute or chronic. Acute pancreatitis ranges from a mild presentation to a severe, life threatening form. It should be considered in any patient who has sudden onset of severe upper abdominal pain. The incidence of pancreatitis ranges from 4.8 to 24.2 cases per 100,000 people and it is a leading cause of hospitalization in the United States. Chronic pancreatitis is more difficult to diagnose, as it may be asymptomatic for long periods of time and laboratory values may be normal. Some of the etiologies of pancreatitis include alcohol, smoking, infection, trauma or mechanical ampullary obstruction from gallstones.

Patient presentations:
- Severe upper abdominal pain
- Nausea and vomiting
- Fever, tachypnea, hypotension and hypoxemia with severe disease
- Jaundice in obstructive forms

Differential diagnosis:
- Peptic ulcer disease
  - Intermittent, long standing epigastric pain that does not radiate to the back.
  - Lab tests will show normal amylase and lipase.
- Choledocolithiasis or cholangitis
  - History of gallstones, early elevation of serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST) with normal amylase and lipase levels.
  - Later elevation of bilirubin and alkaline phosphatase.
- Cholecystitis
  - Right upper quadrant abdominal pain that may radiate to the shoulder or back.
  - Positive Murphy’s sign.
- Perforated viscus
  - Sudden onset of abdominal pain with guarding, rigidity and rebound tenderness. Amylase can be elevated, but less than three times normal.
  - Abdominal films may show free air.
- Hepatitis
Acute right upper quadrant pain, anorexia and malaise. Scleral icterus and hepatomegaly. Lab studies show elevation of serum aminotransferases, total and direct serum bilirubin, alkaline phosphatase and normal amylase and lipase.

**Clinical pearls and diagnostic tools:**
- The diagnosis of acute pancreatitis requires two of the following to be present: acute onset of persistent, severe epigastric pain, elevation in serum lipase or amylase two to three times normal, and characteristic findings of acute pancreatitis on imaging.  
  - Lipase remains elevated for a longer period of time and is more specific than amylase.  
- A complete blood count, electrolytes, ALT, AST, bilirubin, calcium and albumin should be obtained to rule out other causes of acute abdominal pain.  
  - A pregnancy test should be obtained in all women of childbearing age.  
- Focal or diffuse enlargement of the pancreas on abdominal CT or MRI is suggestive of pancreatitis.  
  - Imaging is only required in patients with uncharacteristic abdominal pain or serum amylase or lipase levels less than three times normal levels.  
- Ranson’s criteria can be used to predict the severity of disease as well as the outcome using the patients age and lab values measured on admission and then again within 48 hours.  

**OMM Integration:** Pancreatitis is a disease with few treatment options, making the role of OMT beneficial. When combined with standard care, the goals of OMT include increasing arterial blood flow, increasing lymphatic and venous drainage, and normalizing viscerosomatic and somatovisceral activity. One study investigated the effect of OMT as an adjunctive treatment in reducing length of hospital stay in patients with pancreatitis. The study found that patients who received OMT in addition to standard care spent significantly fewer days in the hospital as compared to patients receiving only standard care (p= 0.03).  

**Osteopathic Structural Examination:**
- T5-9 sympathetic reflex  
- Viscerosomatic reflex at T7 on the left  
- Decreased diaphragmatic excursion  
- Occiput to C2 parasympathetic reflex

Additionally, the previous study looked for and treated dysfunctions in the following regions and found that it significantly reduced length of hospital stay in patients with pancreatitis.  
- First rib tender point  
- Posterior ribs T5-9  
- Thoracic transverse process tender points  
- Anterior rib tender points  
- Abdominal tender points  
- Pelvic tender points

**Possible treatment options:**
• Suboccipital release
• Myofascial release to abdomen and diaphragm
• Paraspinal inhibition with focus in the thoracic segments T5-9
• Chapman reflexes
• Counterstrain for tenderpoints
• Sacral Rock

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