# Pancreatitis in Pregnancy

See also Pancreatitis

**Background**

1. Definition
   - Acute inflammatory process of pancreas during pregnancy
2. General info
   - Rare but most common during third trimester
   - Gallstones cause more than 70% of cases
   - Pregnancy does not significantly alter presentation
   - Usually mild and responds to medical therapy
     - But complicated pancreatitis is assoc w/greater maternal and fetal morbidity / mortality

**Pathophysiology**

1. Pathology of dz
   - See Pancreatitis
2. During pregnancy, usually associated with biliary dz
3. Incidence/ prevalence
   - 0.1% to 1% of pregnancies
     - Directly correlated with gestational age and parallels incr incidence of cholelithiasis in pregnancy
   - Probably not incr incidence over nongravid states
4. Risk factors
   - Most commonly associated with gallstones
   - Other causes include:
     - Drugs
     - Abd surgery
     - Trauma
     - Hyperlipidemia
     - Hyperparathyroidism
     - Vasculitis
     - Infection
     - Idiopathic
5. Morbidity/ mortality
   - Maternal: mortality low if uncomplicated but exceeds 10% in complicated cases
   - Fetal: associated w/fetal wastage during first trimester and premature labor in third trimester
   - Both maternal and fetal outcomes have improved possibly due to:
     - Earlier dx
     - Intensive care
     - Improved perinatal mortality rates

**Diagnostics**

1. History
   - Epigastric pain is most common symptom with N/V and fever being common
     - See also: Pancreatitis

2. Physical exam
    - Midabdominal tenderness
    - Abdominal guarding
    - Distention
    - Tympani
    - Hypoactive bowel sounds
    - Possibly shock, pancreatic ascites
    - Grey-Turner's sign or Cullen's sign
        - Suggesting retroperitoneal bleeding
3. Unique exam in later pregnancy
    - Incr abdominal girth due to enlarging uterus may make exam more challenging
        - Abdominal tenderness may be diffuse
4. Dx tests
    - Lab eval
        - Elevated amylase-to-creatinine clearance ratio is present in pregnant pts w/pancreatitis
        - Hyperamylasemia may occur in other conditions
        - Hypertriglyceridemia can falsely lower serum amylase levels in pancreatitis while lipase level remains elevated
    - Lab values unique in pregnancy
        - Lipase level is unchanged in normal preg
        - Amylase level rises only mildly during a normal pregnancy
        - Leukocytosis associated with pregnancy may confound inflammation
    - Dx imaging
        - In mild to moderate acute pancreatitis, abdominal ultrasonography is useful to gauge inflammation
        - CT scanning is superior for delineating pancreatic necrosis in severe cases
        - While US can detect cholelithiasis and duct dilatation
            - Endoscopic ultrasonography is required to reliably detect choledocholithiasis
        - Differences in view of fetal risk
            - While fetal risk should be considered, pregnancy should not cause delay of needed therapies
    - Other studies
        - Fetal considerations/ monitoring
            - Fetal surveillance and monitoring for premature labor as indicated
5. Dx "Criteria"
    - Most morbidity is associated with complications
        - Ranson calculator

**Differential Dx**

1. Key DDx
    - Appendicitis
    - Cholecystitis
    - Pulmonary embolism
    - Placental abruption
    - Preeclampsia

- Gastroesophageal reflux dz
- Peptic ulcer dz
- Preterm or term labor
- Gastroenteritis
- Bowel obstruction

2. Extensive DDx
   - UTI
   - Pyelonephritis
   - Uterine rupture associated w/labor
   - Trauma

**Therapeutics**

1. Mild acute pancreatitis
   - Usually responds to medical therapy
   - Hospitalization indicated for :
     - Discontinuation of oral intake
     - Intravenous fluids
     - Gastric acid suppression
     - Sometimes nasogastric suction
   - Evaluation of fetus and risk for premature labor is indicated
   - Nutritional support
   - Pain mgmt
     - Meperidine
       - Traditional choice
       - Its short-term use appears to be relatively safe
2. Complicated or severe pancreatitis
   - Examples include:
     - Large or persistent pseudocysts, infection, hemorrhage
   - Consultation and intensive care may be required
   - Tx may include surgery in addition to antibiotic therapy, total parenteral nutrition and supportive care
   - Cholecystectomy, if needed is ideally post-partum or second trimester
     - See Cholecystitis in pregnancy
   - ERCP may be performed during pregnancy when indicated
3. Mgmt of pregnancy-related complications
   - Preterm labor
   - Fetal distress

**Follow-Up**

1. Watch for recurrence or chronic pancreatitis
   - Risk recurrence based on etiology
   - Monitor pregnancy for fetal and premature labor risks
2. Specialty and post-partum follow up
   - Post-partum cholecystectomy may be indicated

**Prognosis**

1. Maternal:
    - Related to severity, recurrence, and development of complications
2. Fetal:
    - Related to complications such as preterm delivery

**Prevention**

1. Hypertriglyceridemia related pancreatitis is rare but in some cases is familial and may be preventatively managed

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