# MESENTERIC VEIN THROMBOSIS

**Anatomy:**

- SMV:
  - drains jejunal, ileal, ileocolic, right colic, middle colic, right gastroepiploic, inferior pancreaticoduodenal
- IMV:
  - Drains left colic, sigmoid branches and superior rectal veins
- Portal Vein:
  - IMV drains into splenic, combines with SMV

**Classification:**

Primary (idiopathic) vs. Secondary

- Secondary causes:
  - Prothrombotic states, Hematologic disorders, Inflammatory diseases, Postop states

Kumar et al (2003) – performed retrospective study to determine etiology and nature of SMV thrombosis with or without splenic or portal vein involvement. 35/69 patients had specific etiology. 30/35 patients with specific etiology involved mesenteric veins only.

**Clinical Presentation:**

- Pain not explained by physical findings
  1. Acute: abdominal pain with abrupt onset
     Associated with risk of bowel infarction, peritonitis

  2. Subacute: abdominal pain for days or weeks
     bowel infarction or variceal bleeding is unlikely
- Associated symptoms:
  - nausea, vomiting, anorexia, diarrhea
  - hematemesis, hematochezia, or melena (15% of patients)
  - occult blood in nearly 50%
- Physical Findings:
  - initially nothing
  - fever, guarding, rebound, and hemodynamic instability

  3. Chronic: usually present with complications of portal/splenic vein thrombosis (i.e. variceal bleeding)

**Diagnosis:**

- Elevated lactate and metabolic acidosis (late finding)
- Abnormal abdominal films in 50-75% of cases (i.e. thumprinting, pneumatosis intestinalis)
- CT is test of choice - will establish diagnosis in 90% of cases
  - thrombus may seen as central lucency
  - sharply defined wall w/ increased density
- Angiography, MRI, abdominal paracentesis

**Treatment:**

Medical Management:

- Immediate anticoagulation with heparin (5000 U bolus with infusion adjusted to maintain PTT x 2 of control)
- Anticoagulation for 6 months - 1 year if no ongoing thrombotic disorder, otherwise life long therapy
- Supportive measures (NGT, bowel rest)

Surgical Management:

- Surgical Exploration is not necessary – should be limited to patients with peritonitis or perforation
- Thrombectomy may be accomplished when thrombus is recent and restricted to SMV

**Outcomes**

Medical vs. Surgical?

- Brunaud et al (2001) performed retrospective study from 1987-1999. 14 patients were treated surgically prior to 1995 and 12 medically after 1995. Morbidity 34.6%, Mortality 19.2% with no statistical difference between groups.
- Divino et al (2001) performed retrospective study from 1982-1997. 9 patients were surgically explored. Mortality rate 11%, morbidity of 55%

- Mortality range from 20-50% (age, coexisting conditions, timing)
- Recurrences are most common 30 days after presentation

References:

Braunaud L. et al. *J Vasc Surg.* 2001 Oct; 34 (4) : 673-679.
Divino C. et al. *Am J Surg.*181 (2001) 20-23.
Kumar S. et al. *Am J Gastroenterol.* 2003 Jun ; 98 (6) 1299-304.
Kumar S. et al. *New Engl J Med,* Vol 345, No. 23. Dec 2001

Andrew Horowitz, M.D., D.D.S
July 22, 2004