

MESENTERIC VENOUS THROMBOSIS

Mesenteric venous thrombosis

- was recognized as a cause of intestinal gangrene more than a century ago.
- Mesenteric venous thrombosis accounts for 5 to 15 percent of all mesenteric ischemic events
- usually involves SMV;
- the IMV is involved only rarely.

Mesenteric venous thrombosis is classified as either primary or secondary.

- Currently, an etiologic factor can be identified in about 3/4 of patients.
- The most common causes are:
 - prothrombotic states due to heritable or acquired disorders of coagulation or to cancer
 - intraabdominal inflammatory conditions
 - the postoperative state
 - cirrhosis and portal HTN
 - Oral contraceptive use accounts for 9-18 percent of the episodes of mesenteric venous thrombosis in young women.

The clinical manifestations depend largely on:

- the extent of the thrombus
- the size of the vessel or vessels involved
- the depth of bowel-wall ischemia.
 - ischemia is restricted to the mucosa: abdominal pain and diarrhea;
 - transmural ischemia: leads to necrosis, with GI bleeding, perforation, and peritonitis.

The location of the thrombus may be determined on the basis of the underlying cause.

- Thrombosis due to **intraabdominal causes**:
 - starts in the larger vessels at the site of compression
 - progresses peripherally to involve the smaller venous arcades and arcuate channels.
- Thrombosis due to underlying **prothrombotic states**:
 - begins in the small vessels
 - progresses to involve the larger vessels.

The transition from ischemic to normal bowel is usually gradual, unlike that seen with arterial occlusion.

Clinical presentation: acute, subacute (days to weeks) and chronic

Acute:

- acute (but more insidious than arterial) onset mid abdominal colic,
- pain out of proportion to physical findings.
- 75% had pain >48hrs prior to presentation.
- ~15% hematochezia, melena, hematemesis
- 50% positive occult blood.
- 50% positive history or family Hx of DVT, PE.

- 1/3 to 2/3 develops peritonitis.
- Ascites in patients with history or family history of thrombosis should heighten suspicion of mesenteric thrombosis.

Chronic:

- pain is common
- also present with varices with or without bleeding

Diagnosis:

- Acidosis and lactate are late findings.
- Abdominal x-rays often show abnormality but only 5% shows specific findings for ischemia
- CT scan: test of choice
 90% diagnosis for large vessel thrombosis (target sign)
 also able to evaluate bowel
- Selective angiogram: diagnosis of smaller vessel disease and possible treatment
- MRI is sensitive and specific
- Laparoscopy is best avoided because pressure decreases mesenteric blood flow.

Treatment

- Surgical:** for peritonitis, ischemic bowel
 second look is recommended if viability is in doubt
- Medical:** unclear indication for antibiotics for non-peritonitis case
 heparin is indicated
 coumadin when applicable (no ongoing ischemia)
 Several successful reports of transhepatic or transjugular thrombolysis. This
 should be considered in large thrombosis

Outcome:

- Mortality 20-50%
- depends on co-morbidities & underlying diseases
- surgical patients are sicker and have longer hospital stay
- survival is short in patients with cancer (depends on type of cancer)
- high recurrence rate (up to 60%), unless anticoagulation given

Chronic mesenteric venous thrombosis:

- often asymptomatic
- diagnosis based on presence of luminal thrombus and extensive venous collaterals
- angiography may be used but rarely required
- Portal hypertension, esophago-gastric varices , splenomegaly, and hypersplenism should be differentiated from splenic vein thrombosis caused by pancreatitis, or pancreatic cancer
- Portosystemic shunt is restricted to patients whose bleeding cannot be controlled with conservative treatment
- If thrombosis is extensive, gastroesophageal devascularization may be considered

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