Retrograde Open Mesenteric Stent (ROMS)
When and How To Do It
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Retrograde Open Mesenteric Stent (ROMS)

- When to do it
- How to do it
- How well does it work

Acute Mesenteric Ischemia Revascularization Options

- Antegrade mesenteric stent
- Open surgical bypass
- ROMS

Dartmouth Hitchcock Medical Center

ROMS most useful in setting of acute mesenteric ischemia requiring laparotomy

Retrograde mesenteric stenting during laparotomy for acute occlusive mesenteric ischemia

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When to Perform ROMS in Acute Mesenteric Ischemia

Suspected acute mesenteric ischemia → yes

Elevated lactate, WBC, or Peritoneal signs

Arteriogram and antegrade mesenteric stent → yes

Laparotomy, attempt to cross lesion retrograde → yes

No Ven bypass, if no vein synthetic

Vein bypass, if no vein synthetic

Arteriogram and antegrade mesenteric stent → no

Laparotomy, attempt to cross lesion retrograde → no

How to do ROMS

Expose SMA at base of transverse mesocolon

How to do ROMS

Expose SMA via lateral approach, if ROMS unsuccessful bypass does not cross over duodenum

How to do ROMS

I-I positioned for cross table lateral view

Retrograde Arteriography of SMA

Cross occlusion with .035 stiff glide wire

Usually forms a loop but re-enters aortic true lumen

Change out to working .018 or .035 wire
Retrograde Stent Placement SMA

Place stent or stent graft over the wire starting at aorta.

Place stents as needed ending in proximal patch

Exposure of SMA

Place 6 or 7 Fr sheath (stent vs stent graft)
Outcomes of ROMS in Acute Mesenteric Ischemia

  - 100% technical success
  - ROMS 17% mortality (n= 6 )
- Blaun et J Vasc Surg 2014
  - 93% technical success
  - ROMS 20% mortality (n = 15)

Outcomes of ROMS in Acute Mesenteric Ischemia

- Low frequency Vascular Disease Consortium Investigators
- 44 patients with acute mesenteric ischemia
- Mean treatment length 4 cm
- 98% technical success
- 45% early mortality
- Primary patency at 2 yrs 76%

Potential Benefits of ROMS in Acute Mesenteric Ischemia

Conclusions

- ROMS is a useful revascularization strategy in the setting of acute mesenteric ischemia when laparotomy is needed
- Revascularization can be performed rapidly
- Risk of patch infection is low
- High incidence of restenosis following bare metal stent placement
- There may be an advantage to stent graft placement