



VASCUPEDIA

Occlusion of the SMA

When endovascular, when open and how

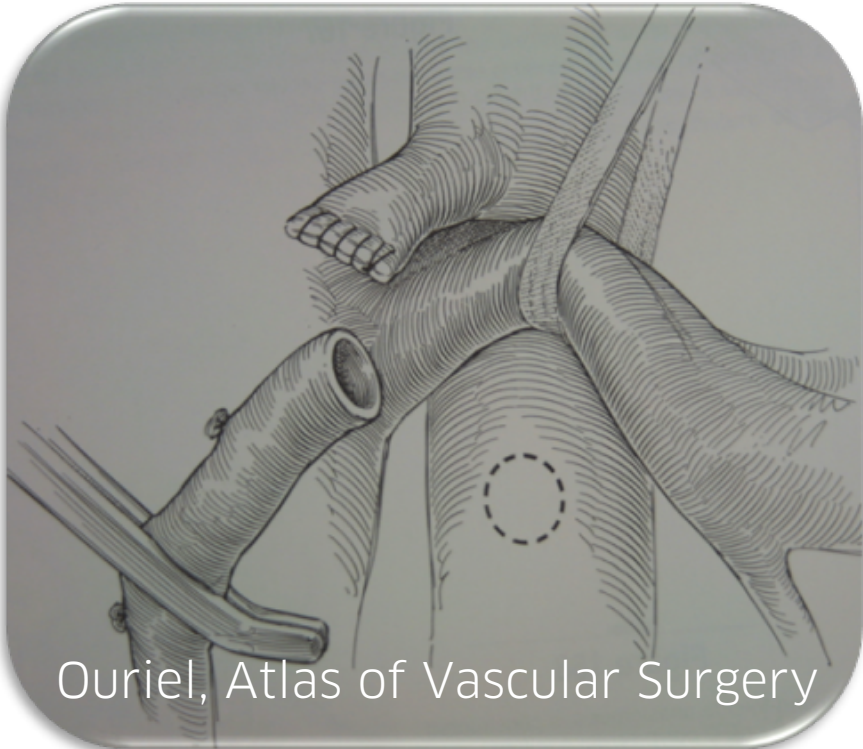
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Mesenteric ischemia: controversies

- Therapy: open surgery vs. endovascular
- Bare stent or covered stent
- Tranbrachial or femoral approach
- Material: autologous vs. alloplastic
- Inflow: antegrade vs. retrograde
- Multiple vs. single vessel revascularization
- Open surgery: TEA – Bypass – Transposition

SMA Transposition

- No alloplastic material
- Infrarenal aorta must be OK

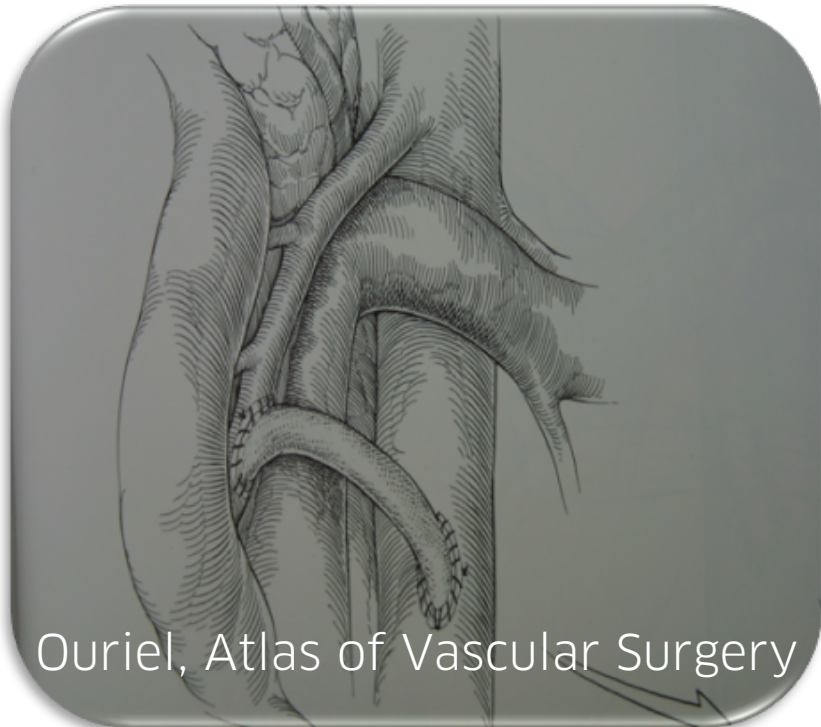


Ouriel, Atlas of Vascular Surgery



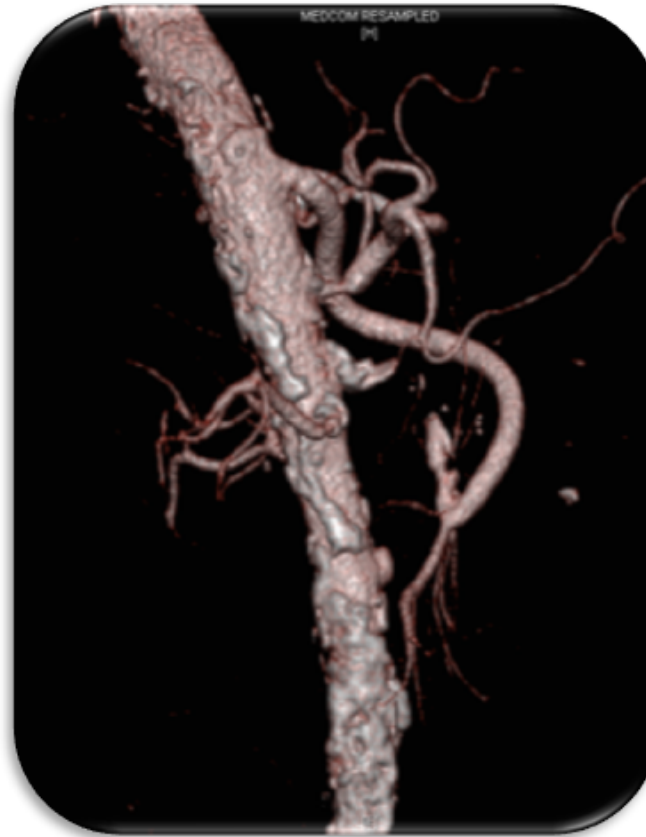
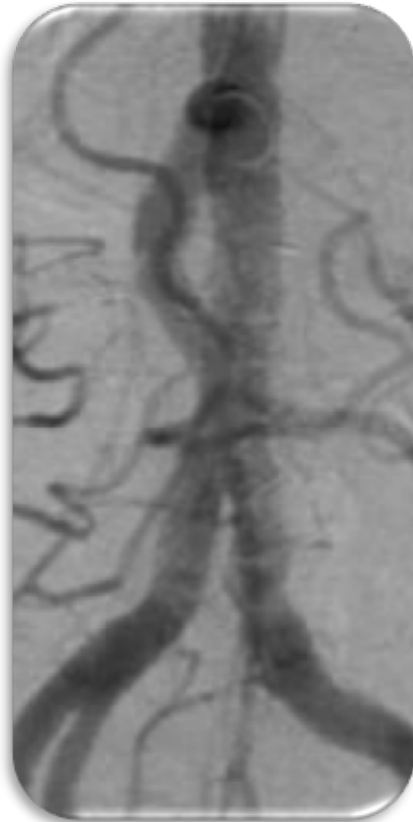
Retrograde mesenteric bypass

- Vein or alloplastic
- Infrarenal Aorta must be OK
- **Attention:** kinking

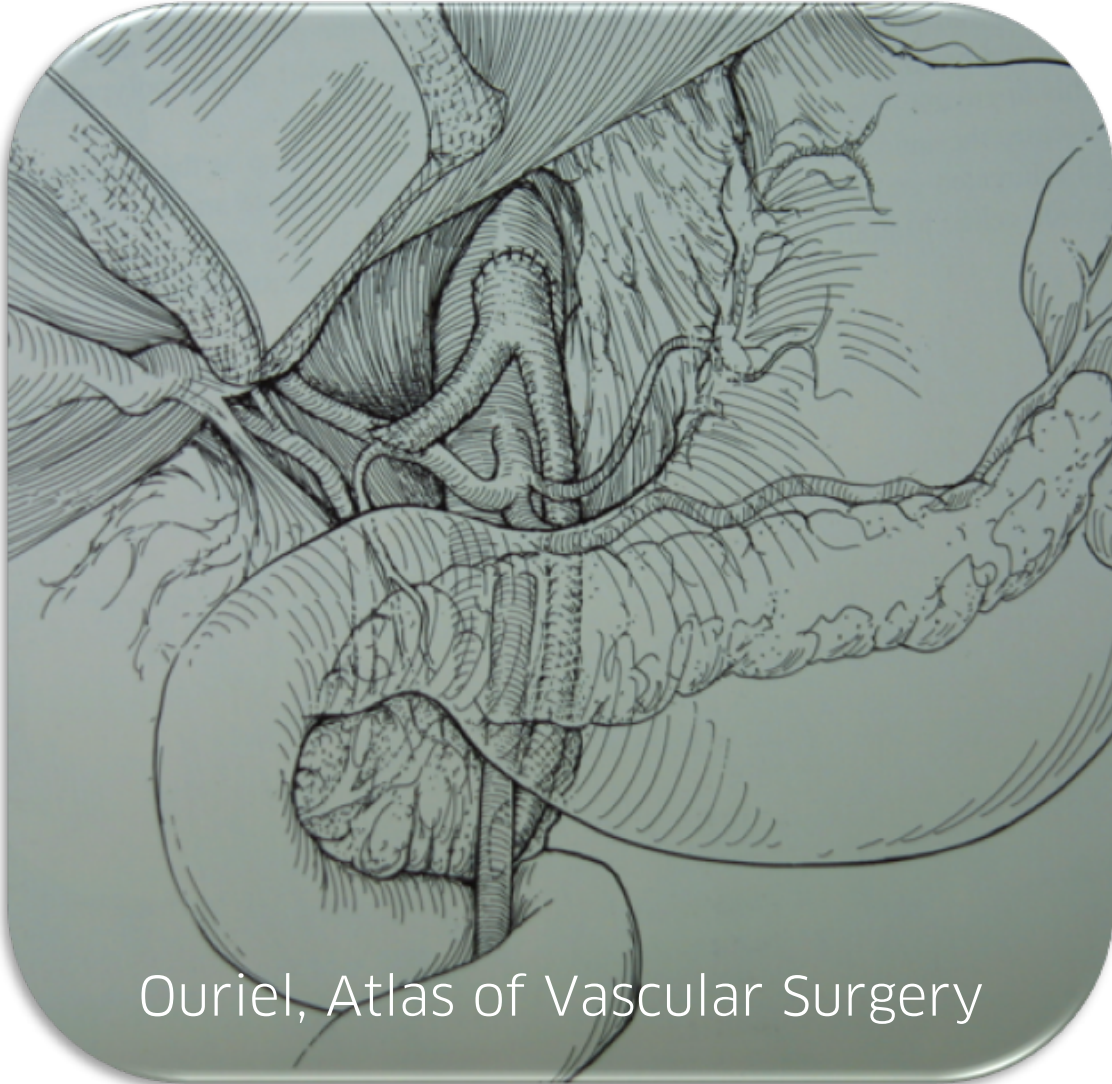


Antegrade mesenteric bypass

- Suprarenal inflow better
- No risk of kinking
- Any location of the distal anastomosis



Antegrade bifurcated Bypass



Open surgery for mesenteric ischemia

- Good mid- and long-term results (primary patency and symptom relief up to 92% at 5 years)
- High perioperative morbidity (16-66%) and mortality
- Longer length of stay at ICU and at hospital

Endovascular therapy of SMA stenosis



Endovascular therapy of SMA occlusion



Table 2. Outcomes of entire CMI patient series treated by endovascular means

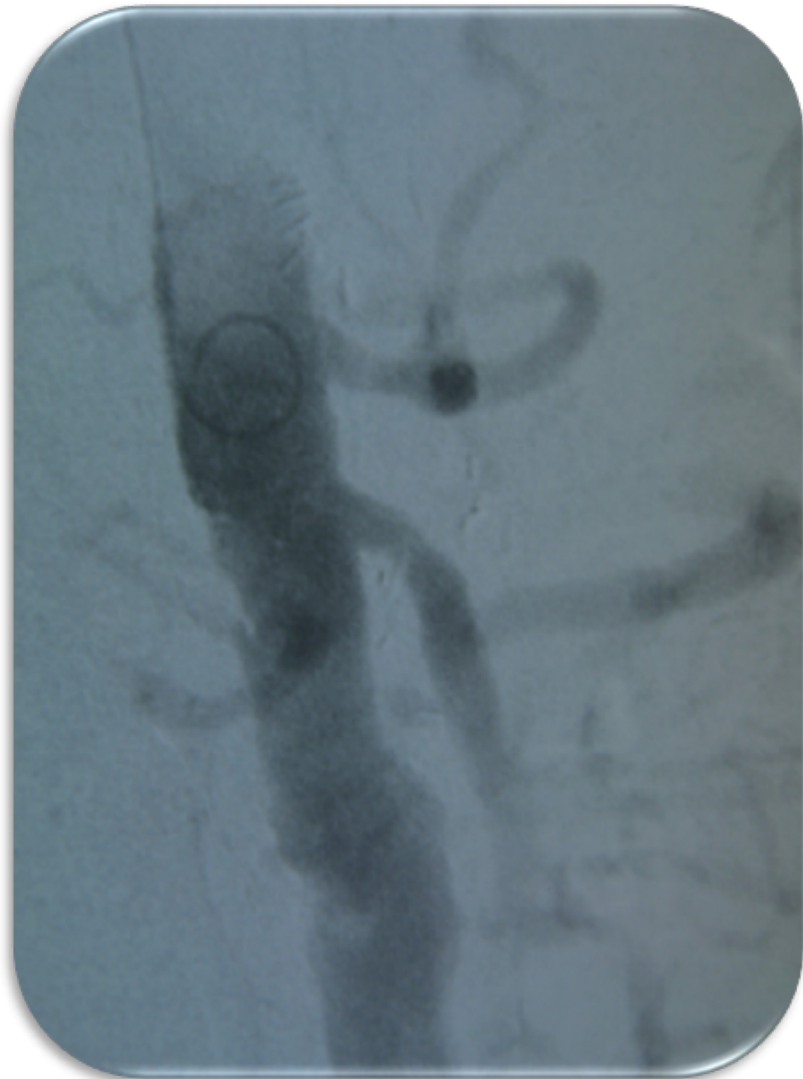
	Overall n= 77	Stenosis n=51	Occlusion n=26	p*
Intention to treat vessels				
Recanalization failure	n= 13, 16.9%	n=5, 9.8%	n=8, 30.8%	
Primary technical success	n=64, 83.1%	n=46, 90.2%	n=18, 69.2%	0.020
Early primary patency	n=41, 64.1%	n=31, 67.4%	n=10, 55.6%	0.200
Early secondary interventions	n=18, 28.1%	n=10, 21.7%	n=8, 44.4%	0.068
Early secondary patency	n=55, 85.9%	n=39, 84.8%	n=16, 88.9%	0.510
Mid-term primary patency	n=24, 37.5%	n=21, 45.7%	n=3, 16.7%	0.028
Secondary interventions	n=14, 21.9%	n=11, 23.9%	n=3, 16.7%	0.528
Mid-term secondary patency	n=45, 70.3%	n=34, 73.9%	n=11, 61.1%	0.370

* Analysis between stenotic and occluded vessels, significance was set at $p < 0.05$ and appear bold typed

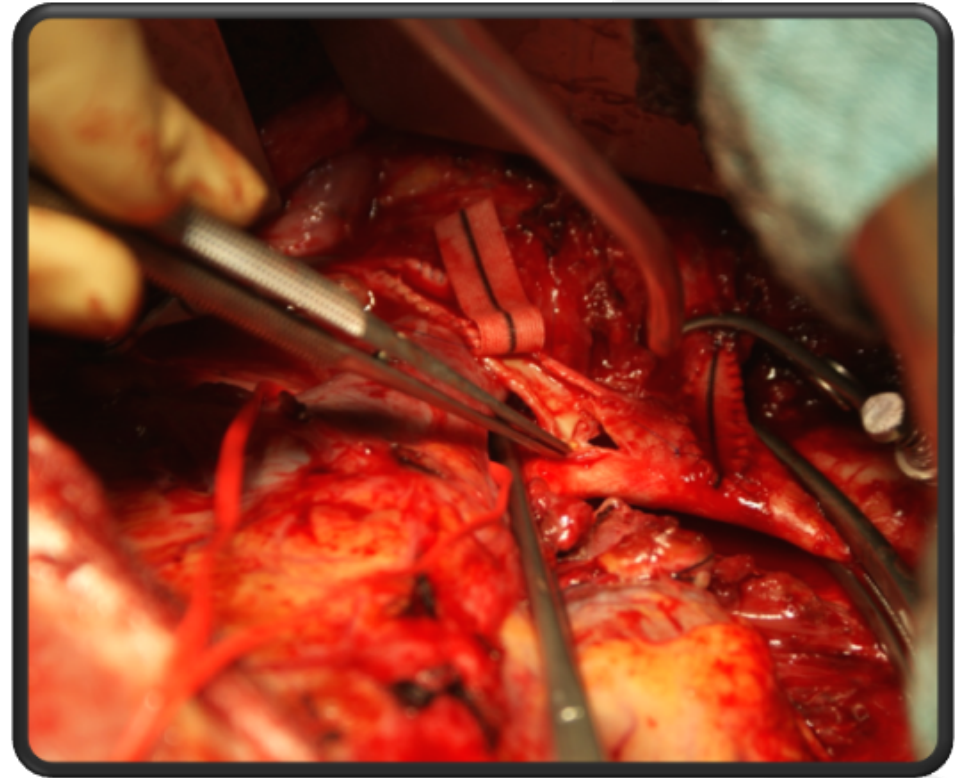
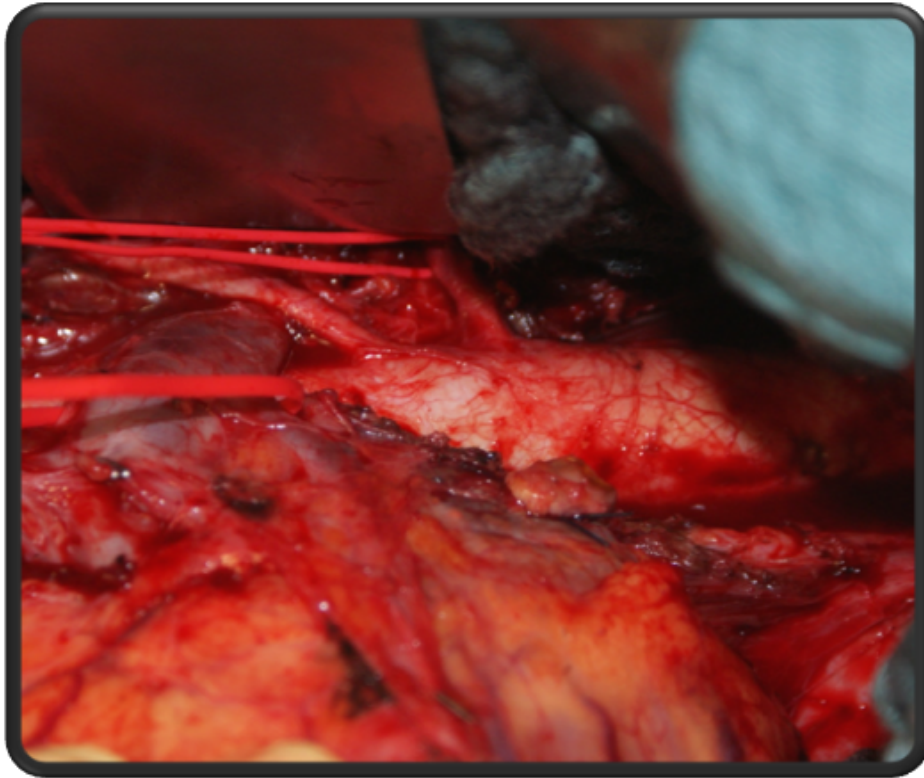
Endovascular therapy

- Relief of symptoms in 95%
- Low morbidity and mortality
- High secondary procedure rate (restenosis in up to 40%; 20-50% require reintervention)
- Useful in obstile abdomen (colonic resection, peritonitis)

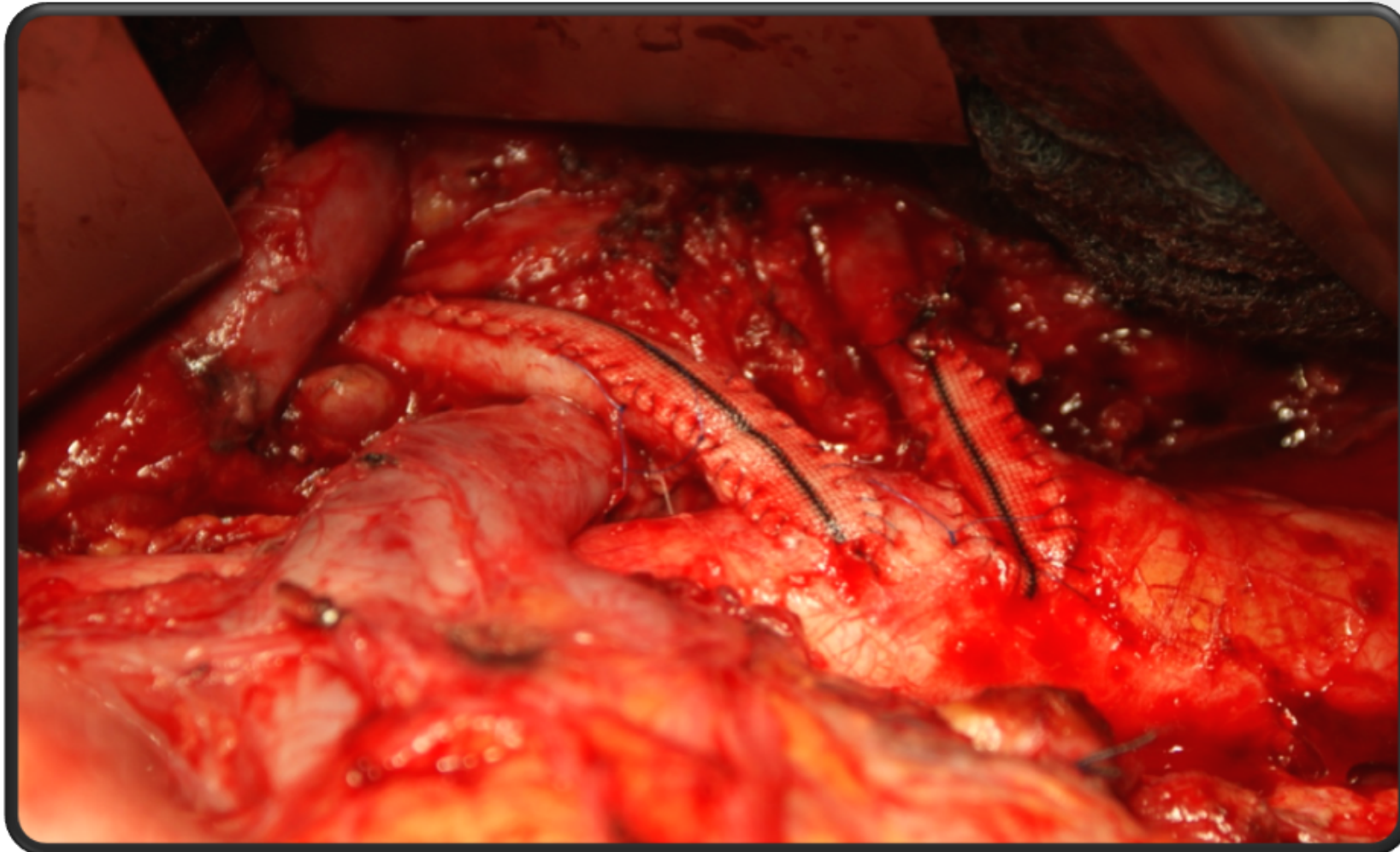
Colonic gangrene, hemicolectomy



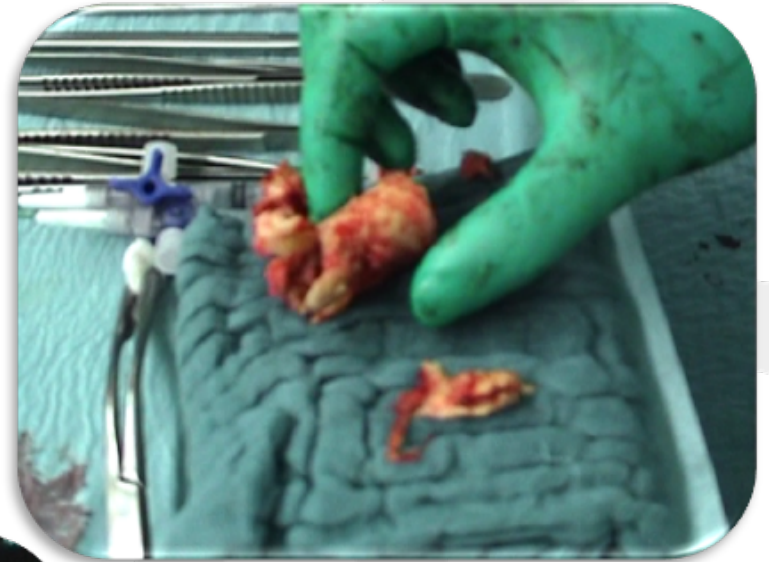
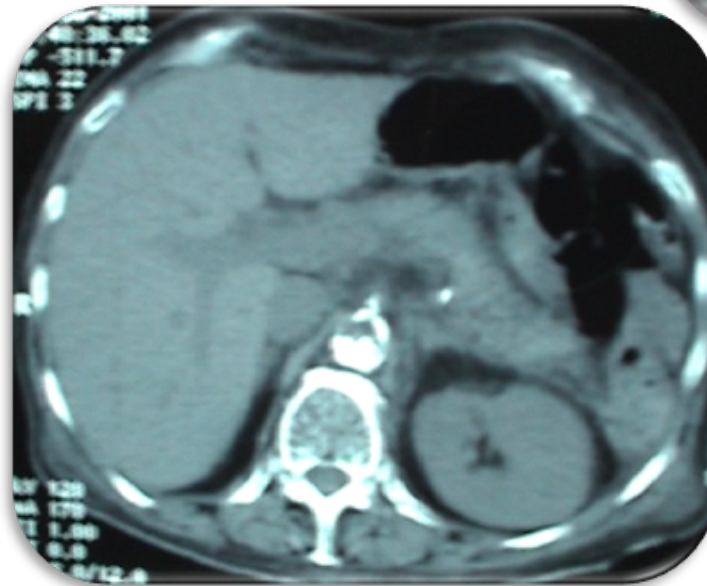
Retroperitoneal (TAAA) approach, TEA, Patch SMA and celiac trunc



Retroperitoneal (TAAA) approach, TEA, Patch SMA and celiac trunc



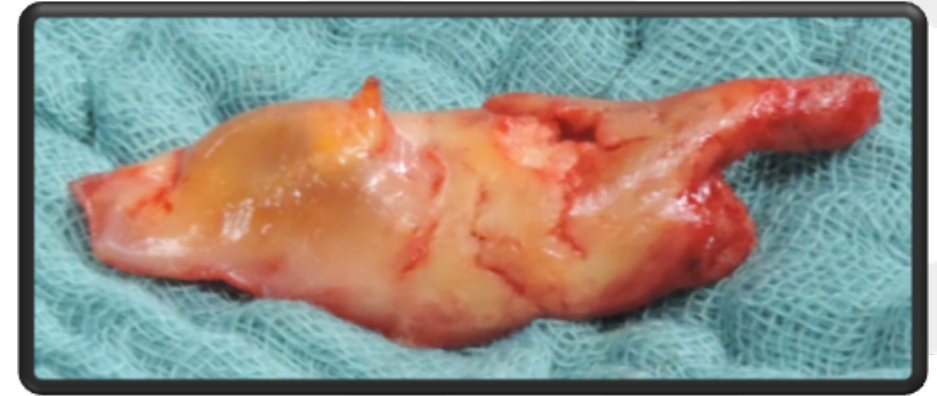
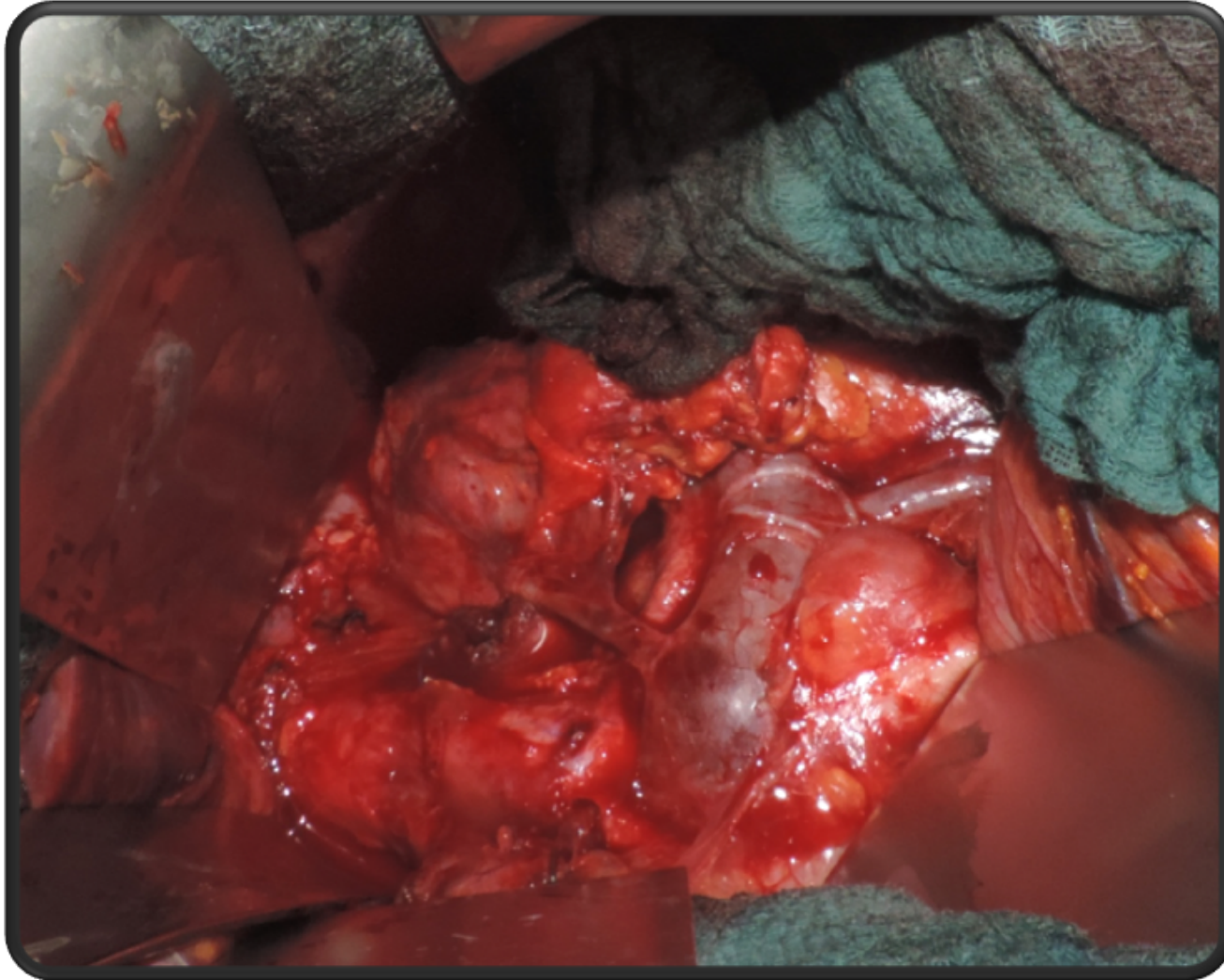
Coral-reef-Aorta



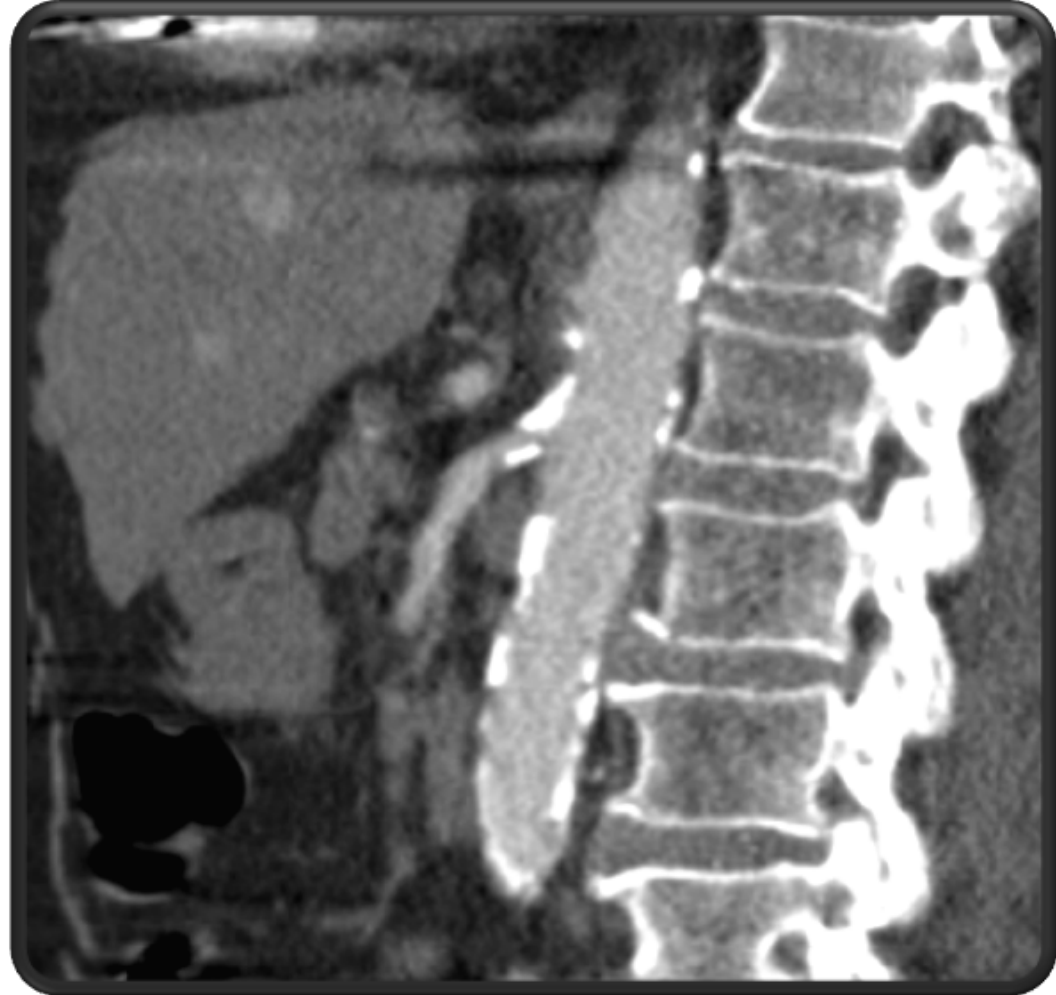
Thrombus can be a contraindication for Endo



Transaortic thrombectomy of the SMA



CTA before and after thrombectomy



Conclusions

- Both open surgery and endovascular techniques are effective. The decision is based on single patient.
- Main parameters affecting selection criteria are the anatomical characteristics of the **lesion** (length, occlusion grade, calcification, thrombus amount) **clinical status** of the patient (life expectancy, operative risk), **operators** experience and his technical skills approaching visceral arteries