Endovascular Rescue Procedures For Acute Visceral Ischemia From Thrombo-Embolism; Tools, Devices, Tips And Tricks

A. Schmidt, MD
Department for Interventional Angiology
University Hospital Leipzig, Germany

Endovascular Techniques for Recanalization of Acute SMA-Occlusions

Catheter-aspiration
- 8Fr brachial access
- Often multiple attempts necessary / cumbersome

Ballon-angioplasty / stent-implantation
- partially ineffective, fragmentation / embolisation

Thrombolysis
- Local long-term thrombolysis
- Pulse-spray thrombolysis

Potential conflicts of interest

- Speaker’s name: Andrej Schmidt

✓ I have the following potential conflicts of interest to report:

Consulting:
Medtronic, Abbott, Boston Scientific, Cook, Cordis, C.R.Bard, Intactvascular, ReFlow Medical, Spectranetics, Upstream Peripheral

Endovascular Therapy of an SMA-Occlusion

Potential disadvantages
- Time-consuming / surgery is delayed
- Success not guaranteed
- Risk of ischemia / death increases

Thrombolysis:
Risk of bleeding from ischemic bowel and surgical wounds

Acute Mesenteric Ischemia – Endovascular

Transbrachial Catheter-directed Aspiration

Acute SMA occlusion

15 mg rtPA local, Multiple aspirations/ Guidewire passages
Percutaneous Mechanical Thrombectomy in Acute Arterial Occlusions

AngioJet
Rotarex

Rotarex for Thrombotic / Embolic Occlusions

6F and 8F / 40 000 RPM

Aspirex / Rotarex Thrombectomy for Acute SMA-Occlusions

3 cases of acute SMA-occlusion treated with Rotarex / Aspirex-thrombectomy.

6Fr Rotarex-thrombectomy:
- case report of an occluded covered stent of the SMA

Rotarex for Acute SMA-Occlusions

- 2011 – 2015:
  - 18 patients with acute SMA occlusion
    - Main trunk occlusions

Etiology:
- Atrial fibrillation/arrhythmia 11
- Acute myocardial infarction 5
- Arterial thrombosis 2

Acute SMA Thrombosis / Embolus

Left Brachial Access
- 6 F (90 cm)
- Guiding-Catheter
- 100 cm MP or JR

0.018" guidewire and support-catheter passage
**Rotarex in SMA Occlusions**

**Acute Results**
- Technical success 100 %
- (arcade-flow )
- Mean treatment-duration 27.4 min
- Complications: 2 perforations, selflimiting
- Additional ballooning / stenting 4 (22.2 %)

**Rotarex in SMA Occlusions**

**Acute and mid-term Results**
- Laparotomy following reca. (13/18) 72.2 %
- In-hospital mortality (8/18) 44.4 %
- 1 deaths due to short bowel syndrome
- Overall mortality due to AMI @ 1y 50 %

**Diagnosis / Therapy Pathway**

**Acute Mesenteric Ischemia (AMI)**

- Diagnosis AMI
- Indication for laparotomy
- yes: Resection
- no: Surgical revascularization
- Endovascular revascularization

**Implemented Diagnostic and Treatment Pathway**

- Diagnosis AMI
- Endovascular revascularization
- Decision to Laparotomy