Splenic Embolization
for
hypersplenism, portal hypertension and liver transplant patients

Jochen Fuchs
Department for Diagnostic and Interventional Radiology
Leipzig University Hospital
Disclosure

Speaker name:
Jochen Fuchs

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- [ ] I do not have any potential conflict of interest
Indications

- Splenic trauma
- Hypersplenism
- Portal hypertension
- Splenic artery aneurysm
- Splenic artery steal syndrome (SASS)
- Preoperative (splenectomy in high risk patients)
Technique

(partial) splenic embolization

vs.

splenic artery embolization

- devascularization of the parenchyma
- peripheral catheter position
- particles or liquids

- occlusion of the splenic artery
- proximal catheter position
- coils or plug
Anatomy
Materials

● how to get there
  - Celiac Trunk: Cobra, SIM 1 or 2, Shepherd Hook
  - 4F (for AVP 6F)
  - microcatheter (for particles): 2.4 / 2.7 F
  - brachial access!

● Embolization agents
  - particles (PVA, gelatine microspheres) 300-700 µm
  - gelfoam
  - glue (cyanoacrylate)
  - coils or vascular plug
Hypersplenism

Why embolization?

- alternative to surgical removal
- preserving immunological function

How?

- Devascularization by peripheral embolization (~2/3)

Madoff et al, Radiographics 2005
Hypersplenism

Why embolization?

- alternative to surgical removal
- preserving immunological function

How?

- Devascularization by peripheral embolization (~ 2/3)

Results

- shrinking of the spleen ~ 50-60 %
- platelet count rises (also WBC)

1. He et al, WJG 2011
2. Romano et al, EJR 2003
3. Sangro et al, Hepatology 1993
Portal Hypertension

Why embolization?

- alternative to TIPS (e.g. hepatic encephalopathy)
- supplementary to BRTO (Balloon-occluded Retrograde Transvenous Obliteration)

How?

- Devascularization by peripheral embolization (~ 2/3)

Results

- lowering portal pressure and reducing variceal bleeding episodes

5 Koconis et al, SIR 2007  6 Chikamori et al, WJS 2010
7 Yoshimatsu et al, JVIR 2012  8 Zannini et al, Arch Surg 1983
Liver transplant patients

**Why embolization?**

- after OLT in patients with Splenic Artery Steal Syndrome
- before OLT in patients high probability for SASS (diameter splenic>hepatic artery) – instead of ligation

**How?**

- proximal embolization with coils / plug

**Results**

- improving arterial perfusion of the graft
- preventing ischemic biliary complications

---

9 Uflacker et al, CVIR 2002  
10 Nüssler et al, Liver Transpl 2003  
11 Vogl et al, Röfo 2001  
12 Valente et al, Transplantation 1996
Thank you for your attention!
After 10d
Splenic Embolization
for
hypersplenism, portal hypertension and liver transplant patients

Jochen Fuchs
Department for Diagnostic and Interventional Radiology
Leipzig University Hospital