

Embolization of rectal arteries in the treatment of hemorrhoidal disease



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Disclosure

Speaker name:

Enrique Esteban.....

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)

- do not have any potential conflict of interest

Hemorrhoids

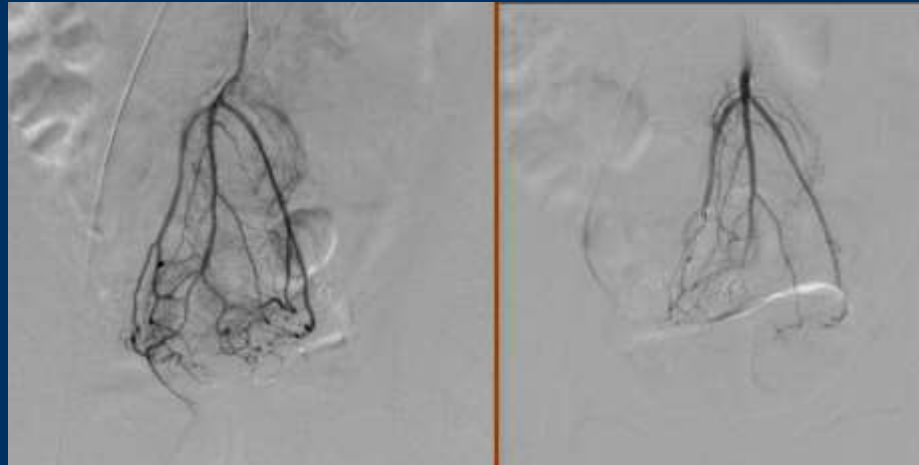
- Most common anorectal condition.
- Prevalence 4-35%.
- Main symptom recurrent anorectal bleeding during defecation → anemia
- Surgical treatment 10% cases.



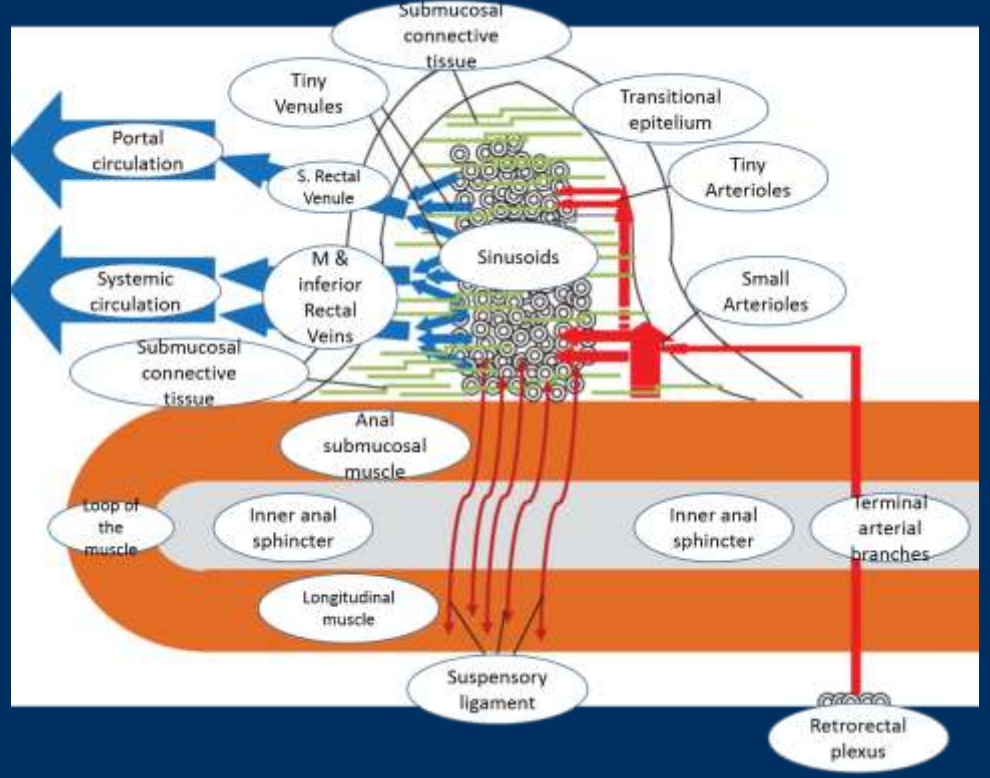
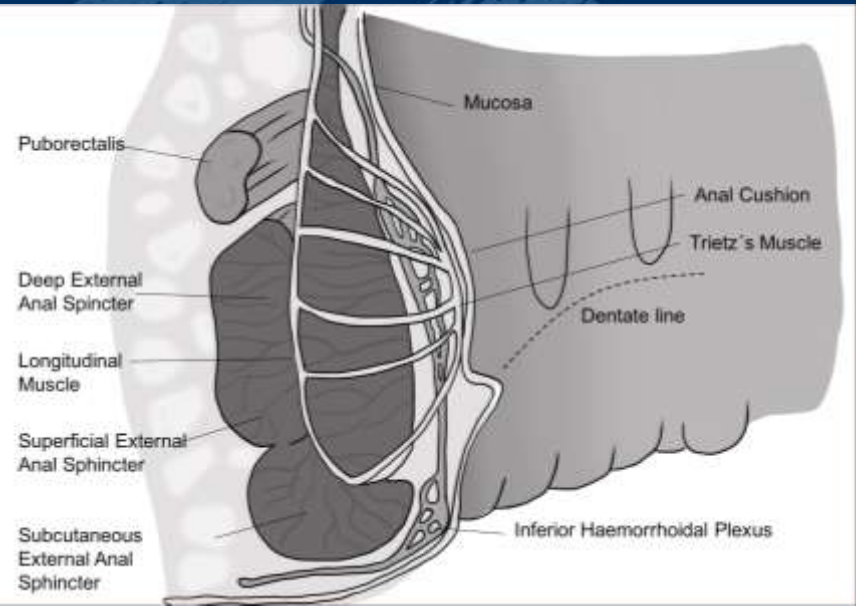
Emborrhoid

Selective embolization of hemorrhoidal arteries, branches of SRA, using microcoils

Galkin 1994; Vidal, 2006

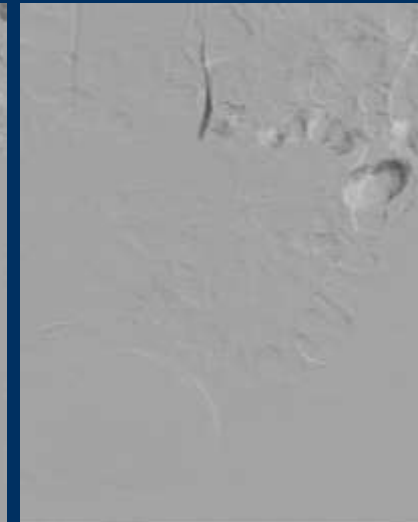
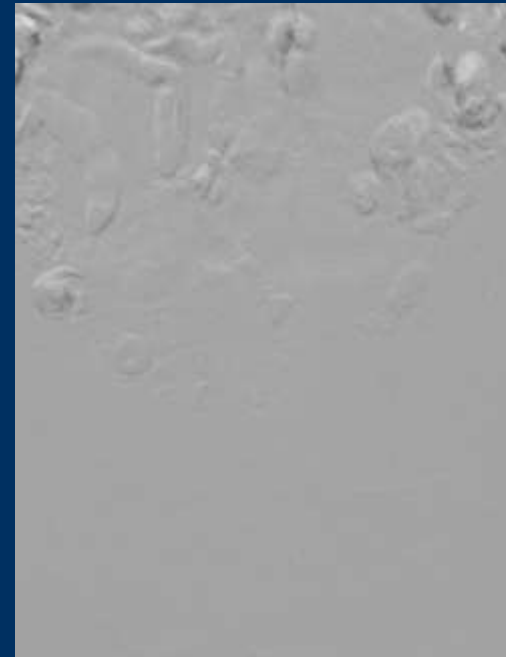


- Anal Cushion: non-vascular and vascular part.
- Based on a demonstrated pathophysiological concept of arterial network hypertrophy in chronic hemorrhoidal disease



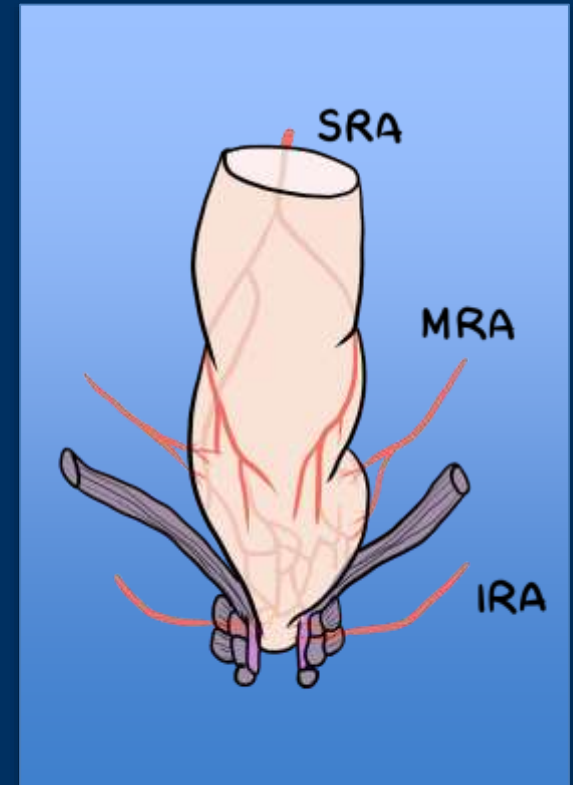
Emborrhoid

- Painless procedure. No complications.
- Improvement in the symptoms: 60-80%
- 30% recurrence at two years.
- Could be related to an incomplete embolization technique
- Distal particles embolization + coils.



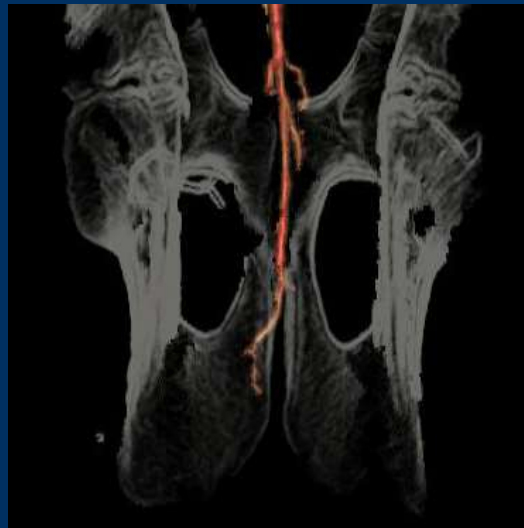
Rationale for using particle embolization and coils

- Direct effect on the plexus
- Could avoid the possibility of nutrition by MRA
 - Unstable artery. Ranges from 12 to 97% in literature.
 - Anastomosis between SRA and MRA can be above the symphysis.
- IRA supplies blood to the Anal canal and anus.
- Coil embolization has been demonstrated to be useful.



Particle embolization in Porcine Model

Porcine model : Particles 500



Haemorrhoid embolisation. Pro
V. Vidal. CIRSE 2016.

40 patients. Symptomatic hemorrhoids grade I, II, III.
5Fr catheter above point of division of SRA.
Irregular PVA 300 µm.
3-5 mm coils in SRA trunk.

Diagnostic and Interventional Imaging (2016) 97, 1079–1084

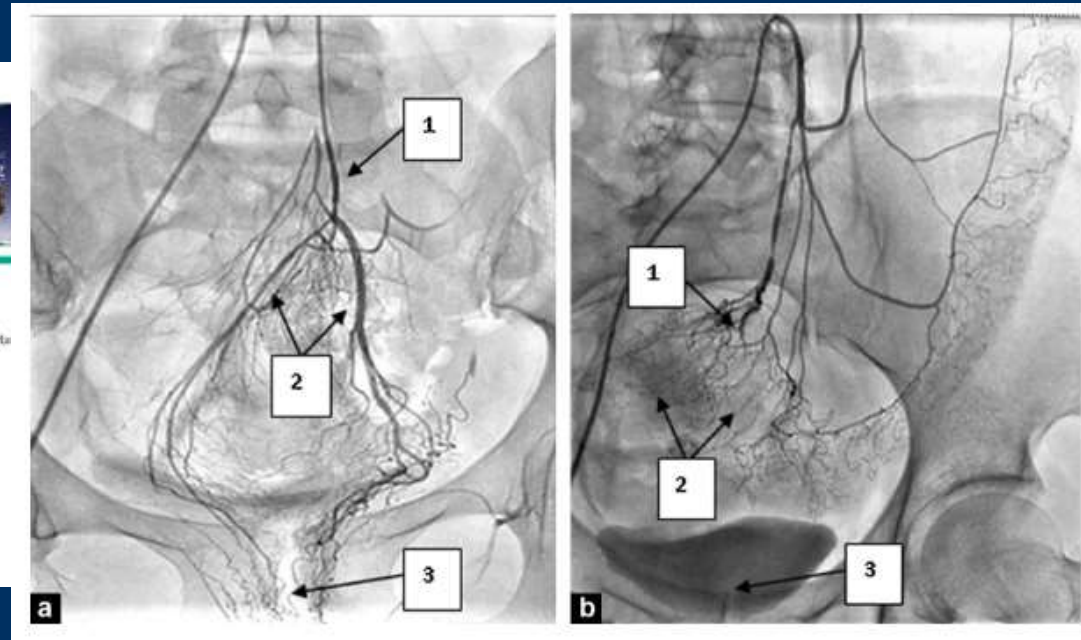


ORIGINAL ARTICLE / Interventional Imaging

Safety and efficacy of superior rectal artery embolization with particles and metallic coils for the treatment of hemorrhoids (Emborrhoid technique)



A. Zakharchenko^a, Y. Kaitoukov^b, Y. Vinnik^a,
F. Tradi^c, M. Sapoval^a, I. Sielezneff^f, E. Galkin^d,
V. Vidal^{e,*}



No immediate complications.
No ischemia.

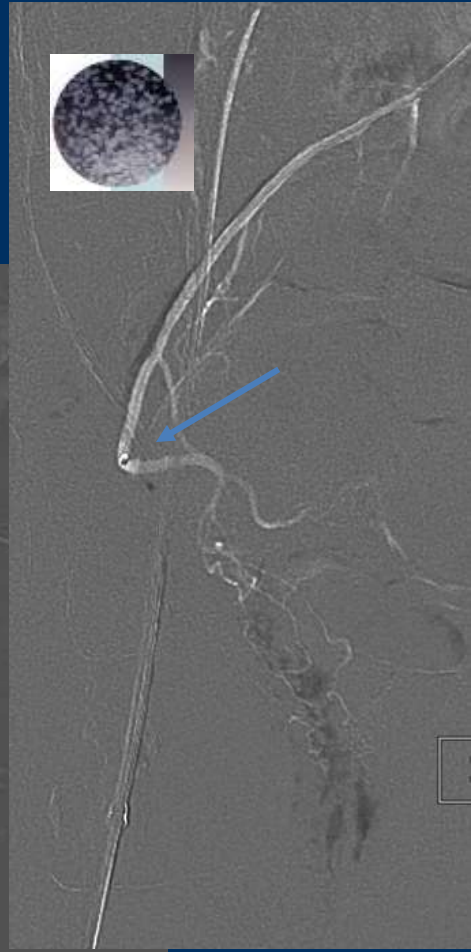
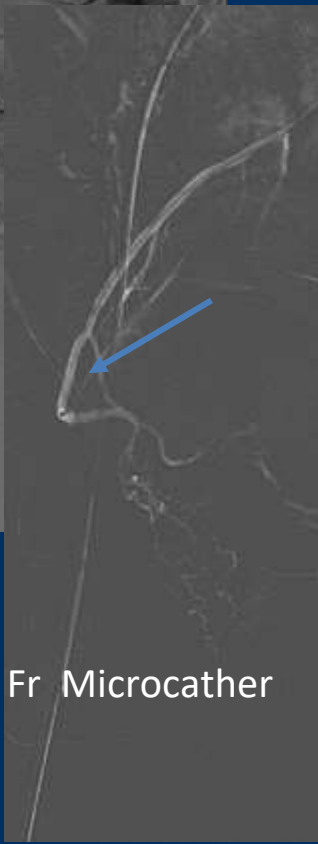
83% satisfaction grade III haemorrhoids and 94% grade I,II at 1 month fu.

Technique

Simmons 1, 4 Fr

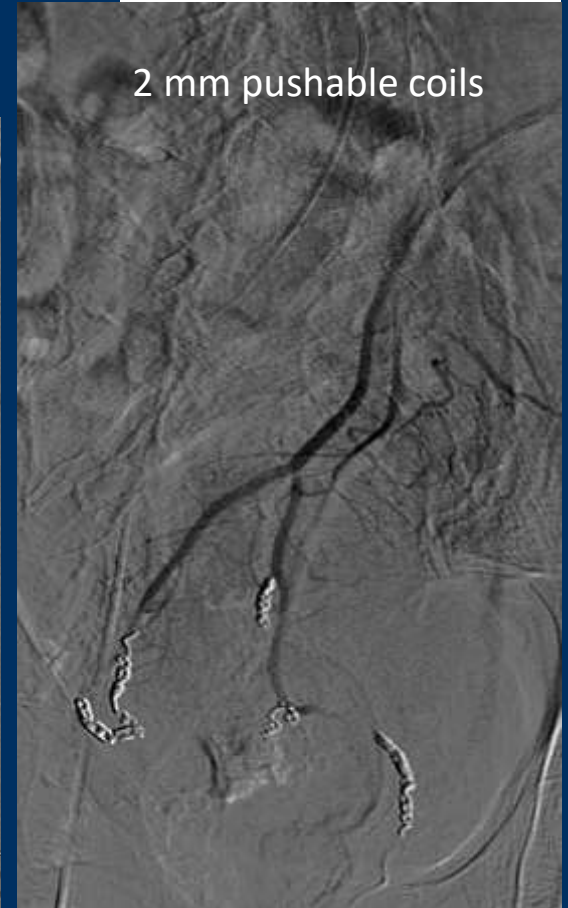


2,4 Fr Microcather



500-700 μm hidrogel microspheres
Endpoint: distal occlusion. "pruned tree"

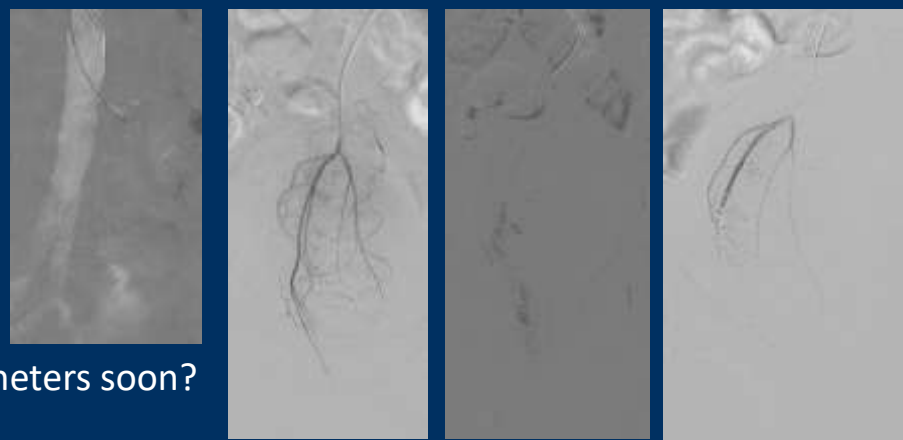
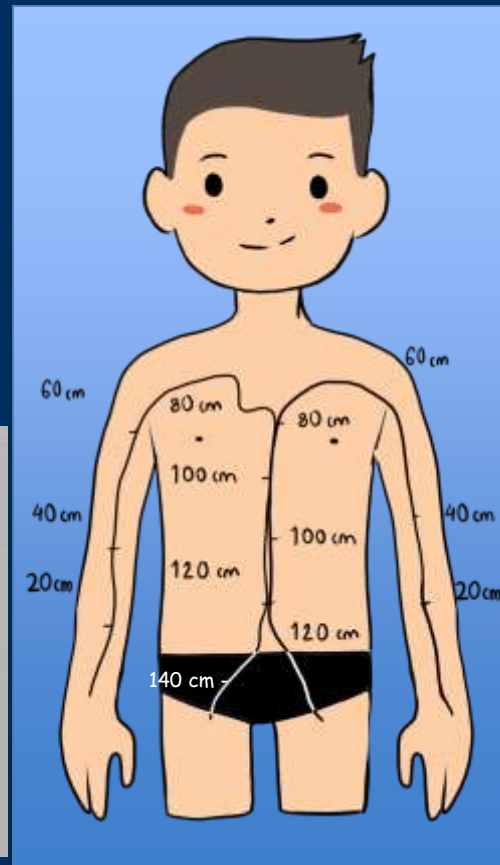
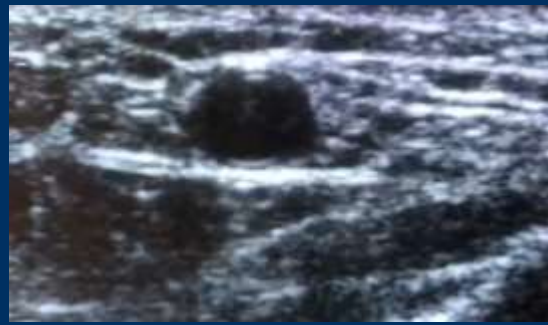
2 mm pushable coils



Our Preferred Technique

US guided radial Access

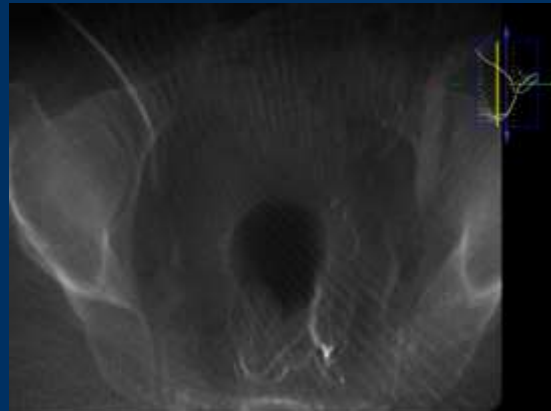
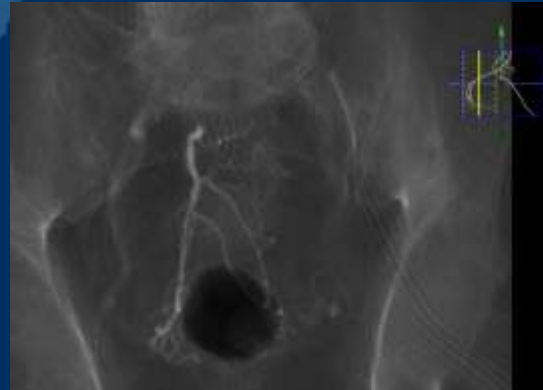
- Allows early discharge of patients
- Left Radial access needed
- 4 Fr 125 cm Multipurpose Catheter.
 - Recently 150cm catheters available
- Microcatheter Bern 2,4 Fr. 155 cm.
- 190 cm 0,014" Guidewire.



- 175 cm microcatheters soon?

Technical Aspects : Cone Beam CT?

Cone beam CT technique
Phillips Xpert Allura.



Our experience

- We have treated 25 patients with disabling chronic rectal bleeding. Evaluated by a proctologist
- 17 men, 8 women. 58,4 yo (36-81).
- Internal haemorrhoids stage II,III.
- Main symptom: Bleeding in all patients.
- After 1 month the surgeon evaluated the patients clinically and with anoscopy. And then clinically at 6 and 12 months.

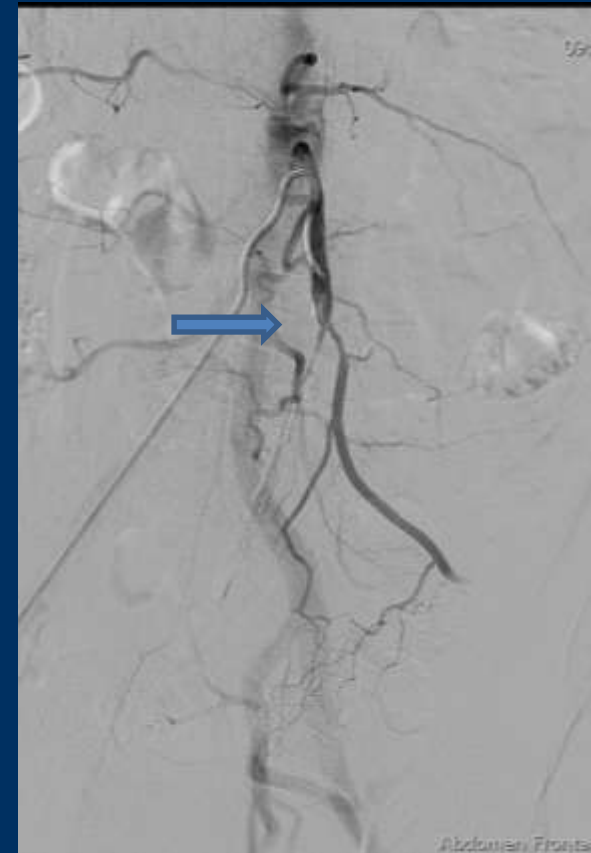


Indications (25 patients)

- Crohn disease..... 3
- Ulcer colitis.....2
- Liver cirrhosis.....4
- Auricular flutter, anticoagulated..... 1
- Hemorrhoids below pectin line.....2
- Emergency bleeding.....1
- Recurrence after ligation/surgery.....6
- Refuse operation.....6

Results

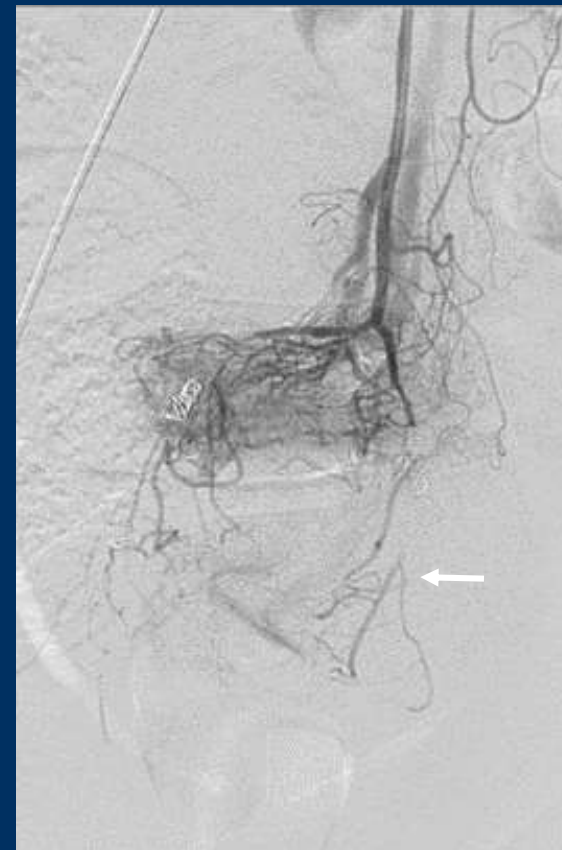
- 22/25 cases embolization was technically successfully.
 - One patient presented IMA vasospasm and the procedure was suspended.
 - Two patients had occlusion of the IMA.
- Average Dose-Area Product (DAP) 53 Gy/cm² (7 – 144 Gy/cm²)



Results

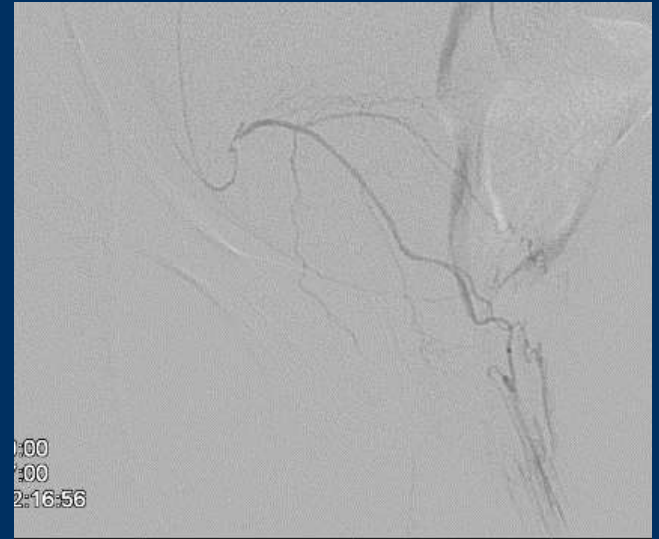
- Clinical success 17/22, (77,3 %). Follow-up: 2-29 months.
 - 3 patients presented pain (grade III VAS) that disappeared after 24h in 2 and lasted for 5 days in one patient. The rest did not experience any discomfort after the procedure.
 - 5 patients presented recurrent rectal bleeding.
 - 4 pt \Rightarrow surgical revision.
 - 1 patient rebled 8 months after embolization \Rightarrow 2nd embolization

51 yo w Grade III. Bleeding hemorrhoids



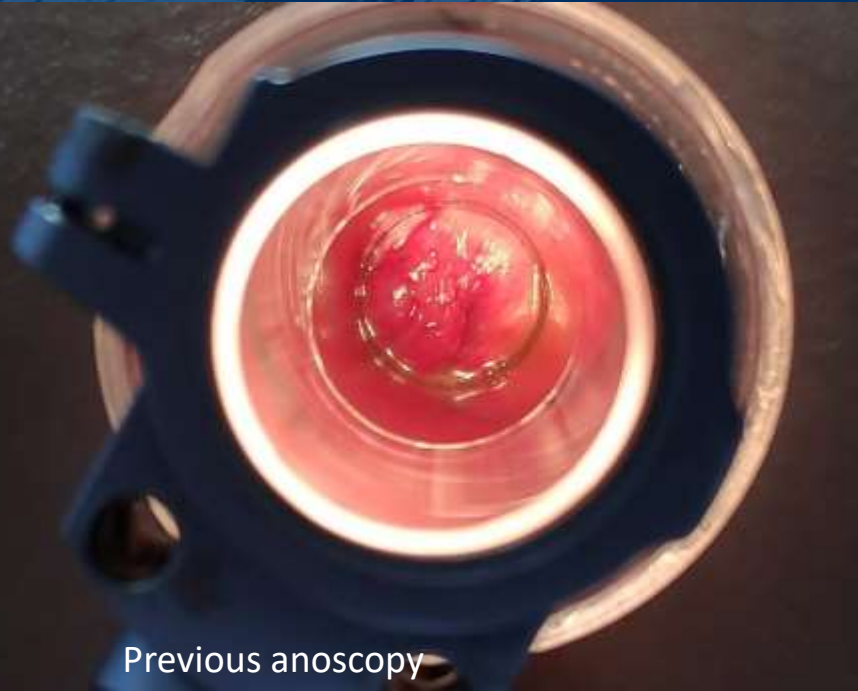
Rebled 8m after embolization

MRA embolization



Results

- Anoscopy performed at 1 month, showed significant improvement in hemorrhoids.
- No ischemic complications detected.



Take home points

- Embolization with spherical particles and coils seems to be safe with few complications.
- Radial access allows early discharge of patients.
- Full significance of MRA its still unknown.
- It's mandatory to reduce the pelvic doses.
- Long term follow up and more studies are needed to establish the best emborrhoid technique.



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