New Detachable Coils Facilitate The Treatment Of Renal And Visceral Artery Aneurysms: Technical Tips

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Endovascular is the first line treatment of VA

- 22 studies 2005-2016
- 93.6 % tech. success
- 99 % visceral preservation
- 3.7% major complication
- 4% reintervention rate

Endovascular is the first line treatment of VA

- Avoid aneurysm rupture
- Preserve distal flow
- Save collaterals

• Aneurysm thrombosis : near 90%
• Branch vessel occlusion : from zero (6 month) to 2% (1 year) to 40% (2 years)
• Stent occlusion: 9% (6 months) to 11% (1 year) to 40% (2 years)

Detachable coils

• True aneurysms
• Saccular aneurysms
• Small necks
• Non bleeding

Aneurysm exclusion/thrombosis
Preserve distal flow
Soft
Pushable in micro catheters
Ideal for distal locations

DISCLOSURE

I have no actual or potential conflict of interest in relation to this presentation
13 VAAs > 2.5 cm
- Technical success 100%
- Non-target embolization 0
- Retreatment 0
- F.U.: MDCT 6m - 3y
- Reperfusion, coils compaction 16% 6 - 12 months

Which are the factors affecting reperfusion?

Packing Density:

- Coils volume
- VAAs volume

By assimilation from interventional neuro radiology

Packing Density should be over 24%

It should be calculated with AngioCalc software

Correlation between the two variables is negative

Packing density is not the only factor affecting the remodeling

Conclusions

- New detachable coils can safely and selectively embolize necked VAAs distally located alongside tortuous vessels
- “Packing” the aneurysm with a density of at least 20 -25 % is advisable (large, thrombosed)
- Low packing density and partial aneurysm thrombosis may cause coils remodeling, reperfusion and eventually retreatment
- Accurate pre-procedural imaging evaluation and planning is crucial.