IN 2019, THE VAST MAJORITY OF RENAL ARTERY ANEURYSMS CAN BE TREATED SUCCESSFULLY BY ENDOVASCULAR METHODS

SOME MESENTERIC ANEURYSMS CAN BE TREATED BY ENDOVASCULAR METHODS, BUT MANY ARE NOT SUITABLE

THE FEASIBILITY AND SUCCESS OF ENDOVASCULAR TECHNIQUES HINGE ON THE ABILITY TO PRESERVE SUPPLY TO ESSENTIAL BRANCH VESSELS WHERE NECESSARY

THIS CAN BE ACHIEVED MORE OFTEN IN RENAL ANEURYSMS THAN MESENTERIC ANEURYSMS

Renal Artery Aneurysms

Aim to exclude aneurysm while preserving supply to distal renal arteries

ENDOVASCULAR OPTIONS:
- Stent-grafts
- Stent-assisted coiling
- Balloon-assisted occlusion with EVOH-based agents
- Flow diverting stents

Stent Grafts

Rundback type 1 aneurysms

Limited anatomically suitable aneurysms

Maintains parent artery patency

Must not be major vessels arising close to aneurysm
**Management and outcomes of isolated renal artery aneurysms in the endovascular era**

- 1988-2011 Nationwide Inpatient database
- 1627 open surgery vs 1082 endovascular
- Similar technical success, in-hospital mortality, complications.

**Mesenteric aneurysms**

Celiac trunk >> SMA >> IMA

Endovascular feasibility depends on whether you can sacrifice non important branch vessels or preserve important ones.

Endovascular vs Surgery choice depends on individual anatomy

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**Two inferior pancreaticoduodenal aneurysms**

Balloon-assisted coiling and Onyx.

- 2846 aneurysms
- 225 pancreaticoduodenal and gastroduodenal arteries
- 95 SMA
- 87 Celiac trunk
- 13 jejunal, ileal and colic
- 9 gastric and epiploic arteries

- No difference in mortality between endovascular and surgery
- Endovascular -> shorter hospital stay, lower complications, more reinterventions
Increasing use of endovascular vs open surgery for VAAs

Endovascular methods can treat almost all renal artery aneurysms.

Endovascular role in mesenteric aneurysms is limited by the local anatomy and need to preserve important branch vessels.

In general, procedures are challenging and require high level endovascular skills.