Endovascular Therapy of Visceral Artery Aneurysms

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Disclosure

Speaker name:

Dr. Amer Malouhi

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
General Guidelines for Intervention

- True aneurysms
  - Symptomatic Women of childbearing age
  - Patients who may require a liver transplant
  - Nonatherosclerotic etiology (i.e., connective tissue disease)
  - Interval growth 0.5 cm/y
  - Multiple hepatic VAA
  - >2 cm hepatic, splenic, or celiac VAAs
  - Any size of rare VAA (SMA and branches and IMA aneurysms)

- Pseudoaneurysms
  - All

1 Hemp J, Sabri S, Tech Vasc Interventional Rad 2015
Before you start any endovascular therapy, just look to...

- How to approach the aneurysm?
- How are inflow/outflow?
- Aneurysm/Pseudoaneurysm?
- Signs of active bleeding?
- Elective treatment/urgent?
- Available of experience?
How to do it?

- Isolation (embolisation "sandwich-technique")
- Covered stent/stentgrafts (saccular VAA/pseudoaneurysms)
- Coils/plugs
- Liquid embolic agents (complex forms)
- Percutaneous thrombin injection (difficult endovascular access)

- Hemp J, Sabri S, Tech Vasc Interventional Rad 2015
1- Aneurysm of common hepatic artery
Stryker-Target®-XL-Coils (electrically detachable coils)
3. Pseudoaneurysm of hepatic artery after Whipple using covered stent
4. Pt post left-sided hemihepatectomy with complicated pseudoaneurysm of CHA using covered stent
Literatures

253 VAA

Non-ruptured
- 216
  - Intervention 13
    - Coil 6
    - Glue 1
    - Stentgraft 1
    - Combination 5
  - Surgery 10
    - Bypass 3
    - Resection+Ligation 4
    - Nephrectomy 1
    - Liver-Tx 2
  - Observation 193

Ruptured
- 37
  - Intervention 32
    - Coil 21
    - Glue 3
    - Stentgraft 4
    - Combination 4
  - Surgery 4
  - Spontaneous sealing 1
    - Resection+Ligation 3
    - Splenectomy 1
Evidence of endovascular therapy?

**Fig.** Trend of annual repairs for open, endovascular, and total visceral artery aneurysm (VAA) repairs. Open repairs decreased significantly ($P < .001$), and endovascular and total repairs increased significantly ($P < .001$).
Conclusions

- Advantages of endovascular therapy
- Several technical procedures for treatment
  - depending on genesis (VAA vs. PVAA) and urgency (emergent vs. elective)
- Covered Stent is the optimal choice generally to treat the pseudoaneurysms.
- Others VAA depending on morphology of aneurysm, tortuosity and preservation of parent artery.
- Close monitoring and follow-up after therapy is necessary (screening)
- Always interdisciplinary decision.
Interventional Radiology
It's like surgery, only

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