Successful recanalization of recurrent TIPS occlusion with Aspirex mechanical thrombectomy

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Disclosure

Speaker name: Dr. Sultan ALAMMARI, MD, DES

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)

- [x] I do not have any potential conflict of interest
Case presentation

May. 2013

16 years old male patient underwent TIPS in the context of Budd-Chiari with portal hypertension, refractory ascites and pleural effusion
14. May. 2013
15. May. 2013

Dilatation + Thrombolysis
Dilatation

8. December 2014
25. December 2014

Dilatation
12. January. 2015
12. January. 2015
12. January. 2015
3. December. 2015 (11/12 post)
TIPS

• (TIPS) is an interventional radiological procedure used to treat the complications of portal hypertension.

• 1988 the first successful TIPS by M. Rössle, G.M. Richter, G. Nöldge and J. Palmaz at the University of Freiburg

• Indications
  ❖ (99%): variceal haemorrhage refractory to endoscopic and medical therapy, refractory ascites
  ❖ Others: hepatic hydrothorax, hepatorenal, hepatopulmonary, and BuddeChiari syndromes.
TIPS complications *

• Peri-procedural complications: intraperitoneal haemorrhage, laceration of the hepatic artery, or portal vein, biliary injury etc.

• Stent related complications: infection, occlusion and thrombosis

• Non stent related complications: deterioration in liver function, hepatic encephalopathy (most frequent complication related to the procedure+) and right heart failure

+Ripamonti et al. TIPS related complications and practical solutionsSemin Intervent Radiol.(2006) 23, 165-176
Cause of stent related complications

• **Early dysfunction**: (underlying technical problem)
  - incomplete coverage: stent misplacement, stent migration, or stent recoil of the tract, kink

• **Bile-related factors**: transection of bile ducts during shunt creation resulting in biliary fistulas *

• **Non-bile-related**: tract stenosis related to pseudointimal hyperplasia *
  - Viatorr e-PTFE covered stents show patency rates of up to 86% at 1 year+

Stent revision

• Revision to reduce stent flow (hepatic encephalopathy, right heart failure)

• Revision to re-establish stent patency
  • Local thrombolysis
  • Angioplasty / stent extension
  • Thrombectomy (different thrombectomy devices)
Rotational Thrombectomy: Aspirex and Rotarx

- Combine mechanical clot fragmentation and active negative-pressure removal of thrombus particles

- Peripheral arterial occlusions (native and stents)
- Visceral arterial occlusions (native and stents)
- Pulmonary embolism
- SVC and IVC
- DVT
- AVF
Rotational Thrombectomy: Aspirex

- OTW 0.032
- 6 – 10 F
- Non rotational head (unlike rotarex)
- Suction, fragmentation and disposing
Conclusion

• Rotational mechanical thrombectomy using Aspirex would be a feasible, safe and efficient option in the management of recurrent TIPS occlusions
Thank you
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