

CAIR Case of the Month

Case courtesy of Drs. T.Y. Chan, J.
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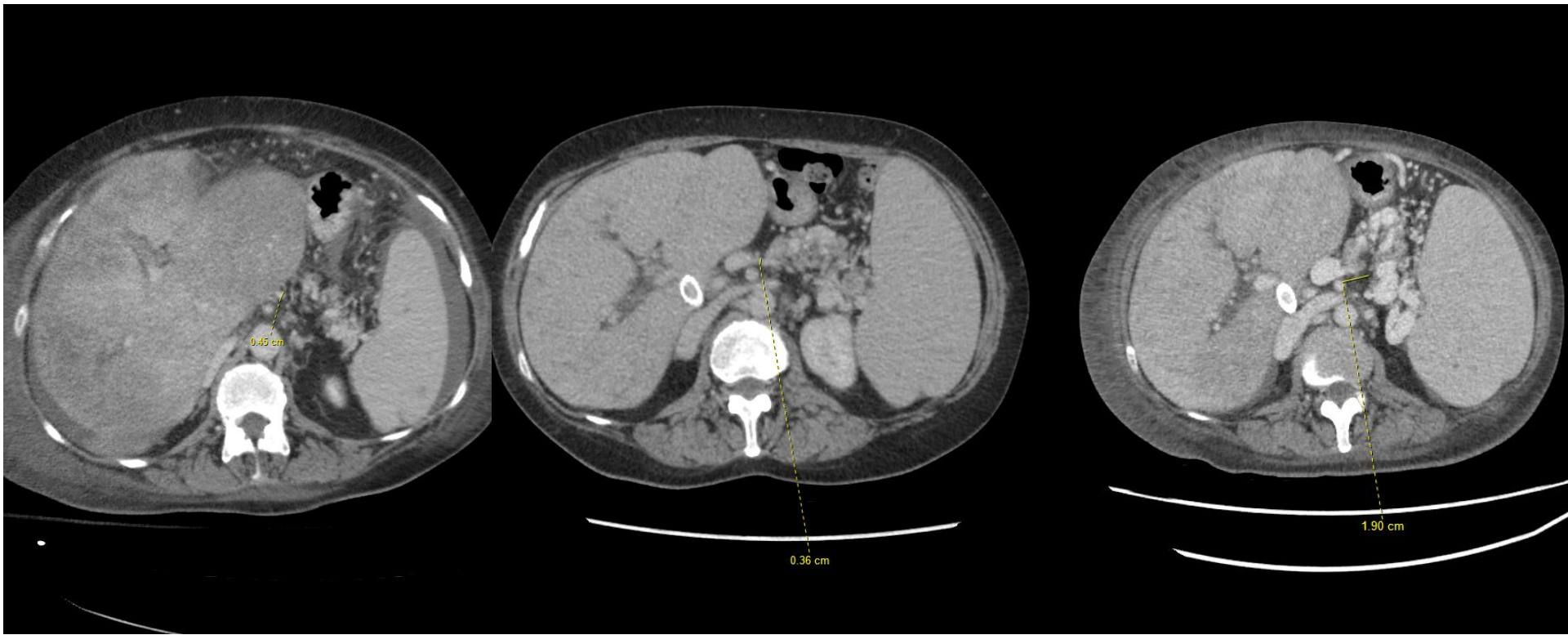
University of Toronto
Sinai Health System
University Health Network
Women's College Hospital

Background

- Budd-Chiari with patent portal venous system
2014
- Direct intrahepatic portocaval shunt (DIPS)
October 2014

Investigations

- CT – DIPS stent patent. Multiple gastric varices. Splenomegaly. Splenic vein (SV) occlusion.



SV=5mm @ 2014
Spleen = 13X5x15cm

SV=3.5mm @ 2017
Spleen = 16x8x19cm

SV=occluded @ 2018
Spleen = 16x9x22cm

Pre-procedural planning and considerations

- Options:
 1. Endoscopic banding and sclerotherapy
 2. Balloon DIPS stent alone and measure pressures.
Stop if gradient < 10 mmHg
 3. Embolize gastric varices via DIPS access
 4. Re-canalize occluded splenic vein
 5. **Plug-assisted retrograde transvenous obliteration (PARTO) via DIPS access**

Technical note

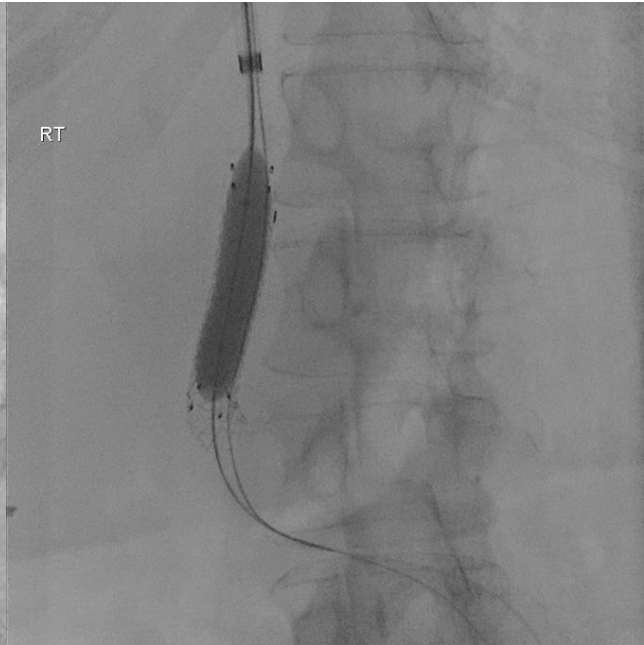
1. RIJV access + 12 Fr sheath
2. Measure porto-systemic pressures
3. Balloon angioplasty VIATORR DIPS stent
4. Identify collateral vein leading to gastric varices – hepatopedal flow confirmed
5. Embolize large (> 2-3 mm) collaterals with microcatheter
6. Amplatz plug collateral vein to protect portal venous system
7. Try to get as distal as possible with microcatheter to fill gastric varices
8. Sclerotherapy of gastric varices performed by pushing sclerosant towards the spleen

Technical note

Step: 1 + 2



Step: 3



Step: 4



Technical note

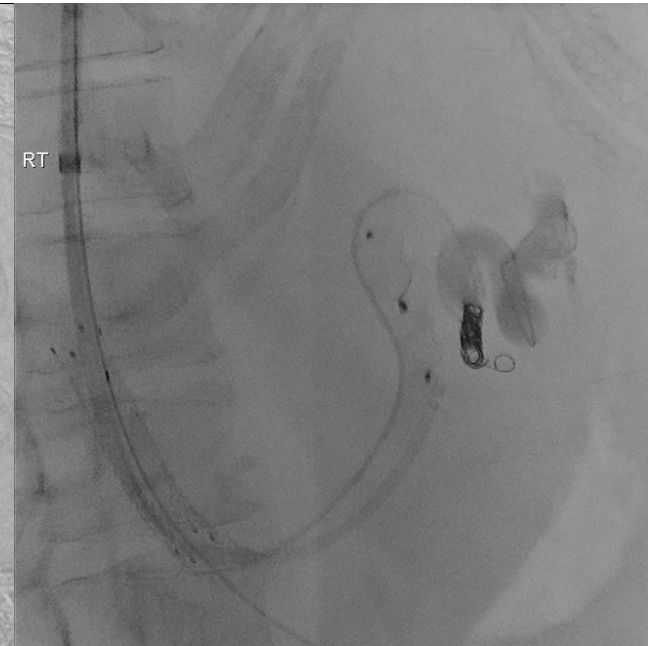
Step: 5 + 6



Step: 7



Step: 8



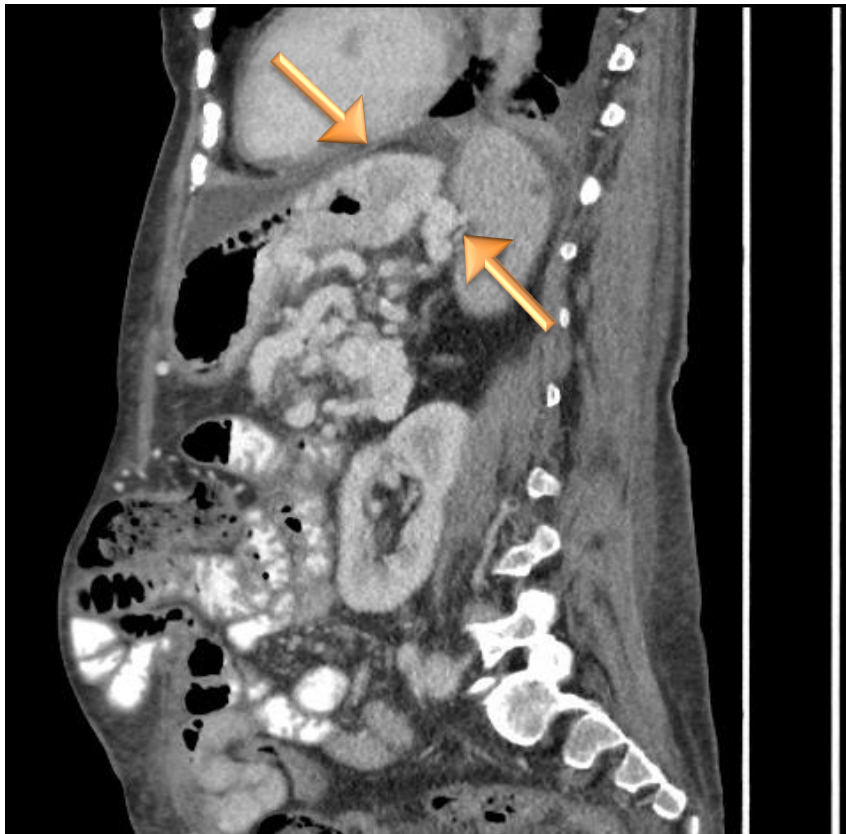
Technical note - Sclerotherapy

Step: 8



Follow-up CT

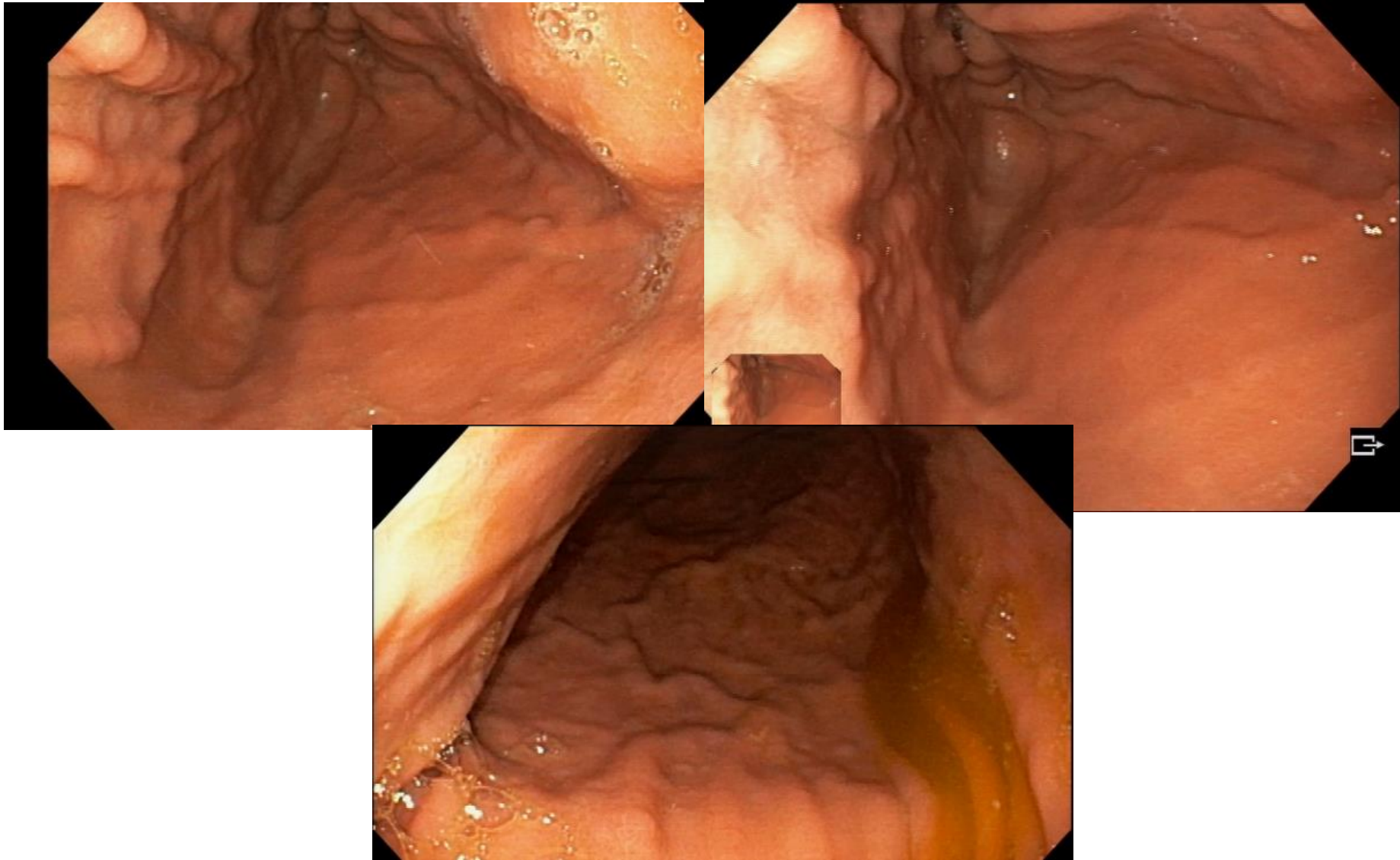
PRE



POST



Follow-up @ 6 months



Discussion

- Complex case with difficult access to varices
- No easily accessible porto-systemic shunt to perform PARTO
- Important to treat inflow of varices
- Choose sclerosant wisely to avoid complications