IVUS assisted management of visceral dissection

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Patient Presentation

- 69 y.o. female with remote history of SMA stent for chronic mesenteric ischemia s
- Developed recurrence of symptoms with weight loss and postprandial pain
- Mesenteric duplex US demonstrated occlusion of prior SMA stent
- Counseled on operative intervention for stent recanalization

Initial mesenteric angiography

Initial angiography demonstrating complete occlusion of SMA



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Mechanical thrombectomy and angioplasty of SMA

Hydrophilic wire and catheter directed across occlusion into SMA with subsequent angiography revealing thrombotic debris within stent

7Fr Penumbra catheter localized to origin of SMA, multiple passes of suction thrombectomy

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SMA dissection

Post angioplasty angiogram shows flow limiting dissection of the SMA distal to the stent



IVUS to assess true vs false lumen

- IVUS confirms the wire is located withing the false lumen
- IVUS confirms the start of the dissection flat and the location of perforators within the flap that can be used to re-enter the true lumen
- IVUS used to size the vessel with appropriate stent size use



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Stenting of SMA

- IVUS images obtained after establishing wire placement in the true lumen
- The dissection was managed with self expanding stent with 1mm oversizing and post dilated with angioplasty balloon
- Completion angiography showing widely patent stents with brisk flow to distal SMA branches



Follow-Up

- Discharged next day, lovenox bridge until therapeutic INR and resumption of coumadin
- 1 month clinic f/u with mesenteric duplex: improved postprandial pain, widely patent SMA w/o evidence of obstruction

Takeaways

- Endovascular interventions for occlusive disease can result in target vessel dissection which can be flow limiting sometimes
- IVUS has proved its utility for appropriate luminal placement in management of thoracic aortic dissection
- This presentation showcases a unique utility of IVUS to aid complex visceral reinterventions