

Endovascular Management of a Symptomatic Giant Hepatic Artery Aneurysm

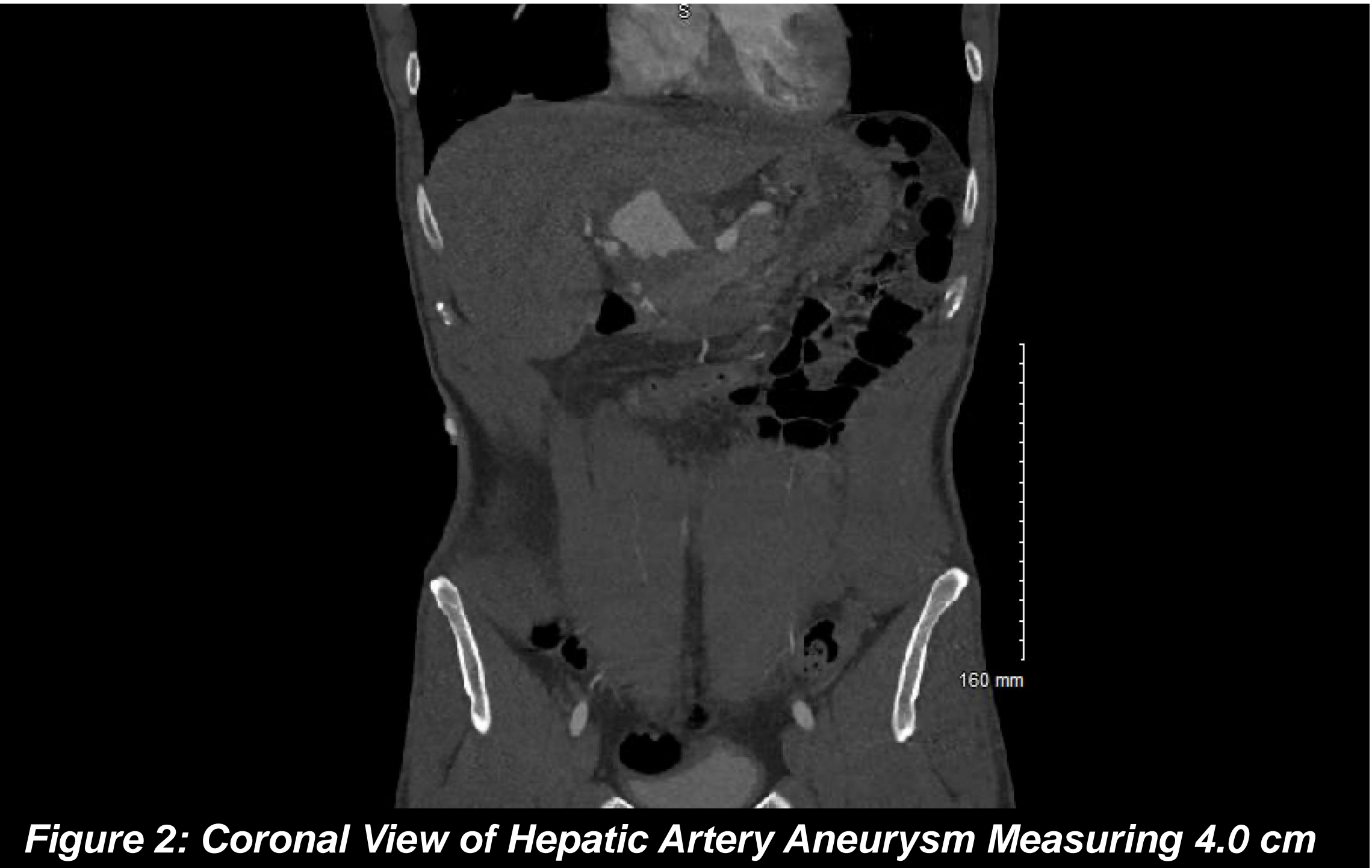
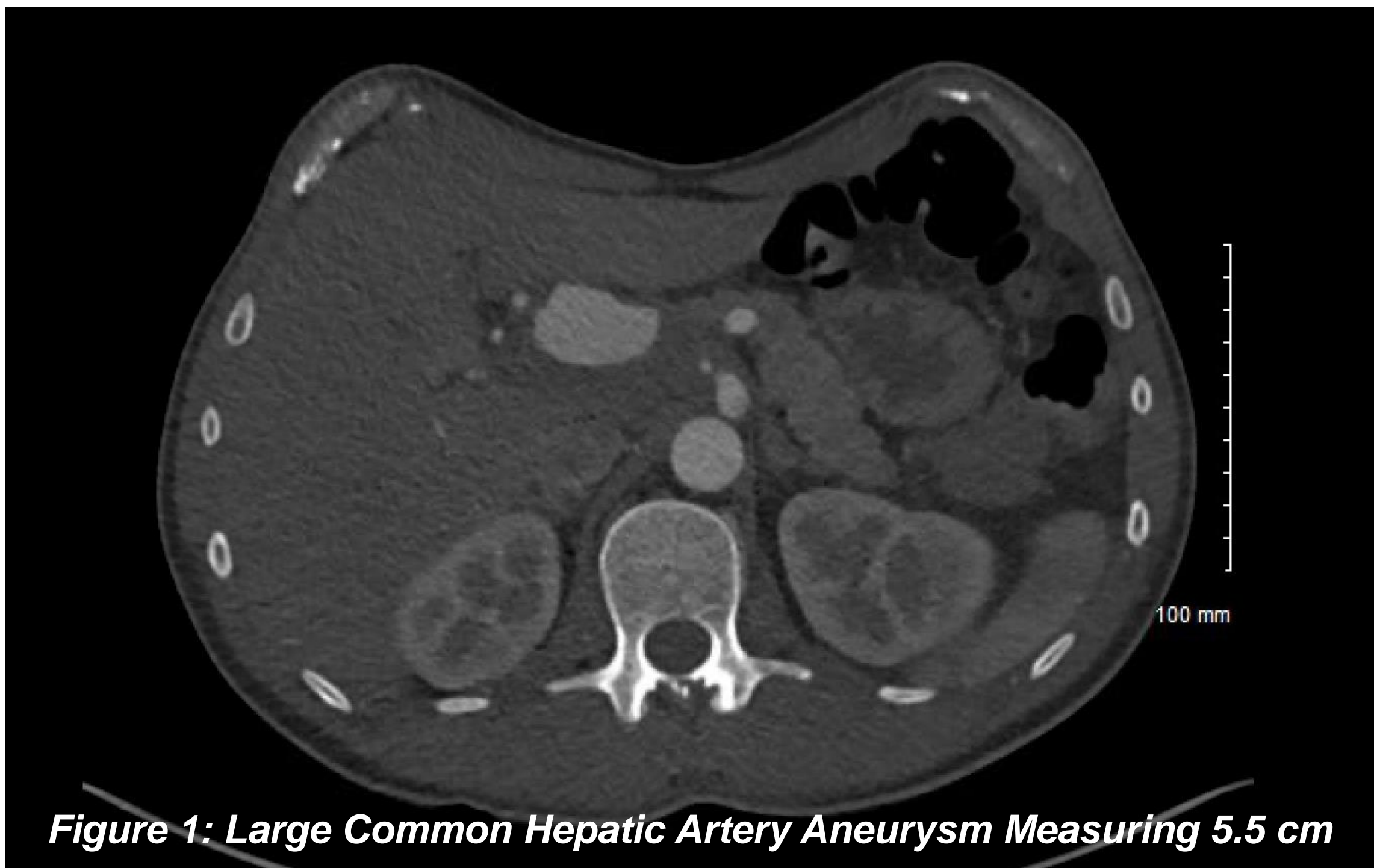
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CASE REPORT

- A 44-year-old gentleman was transferred to our medical center after work-up of non-specific gastrointestinal complaints revealed a 4 x 5.5 cm proper hepatic artery aneurysm. Biochemical markers including liver function testing (LFTs) were normal.
- Cross-sectional imaging demonstrated adequate length of proper hepatic artery both proximally and distally for endovascular exclusion with covered stent placement. Initially transfemoral, and then transbrachial selective hepatic artery angiography was performed. The hepatic artery was successfully cannulated and a covered stent was deployed. Final angiography demonstrated complete exclusion of the aneurysm.
- Approximately 3 weeks later, the patient had recurrence of his symptoms and follow-up CT revealed persistent flow into the aneurysm sac via an endoleak at the distal end of the stent. We then proceeded with selective angiography of the superior mesenteric artery (SMA) which demonstrated robust flow into the hepatic artery distal to the aneurysm via collateralization. We believed this would provide adequate flow to maintain hepatic function and proceeded with coil embolization of the hepatic artery and aneurysm. Final angiography demonstrated complete thrombosis of the aneurysm with preservation of collateral flow into the hepatic artery via SMA.
- The next day, the patient remained stable and LFTs were normal. Immediate postop CTA confirmed thrombosis of aneurysm. At 18 months, the patient remains symptom free and recent CTA confirms thrombosis of aneurysm sac and intact perfusion of the liver.

IMAGES



BACKGROUND

- Hepatic artery aneurysm (HAA) is an uncommon clinical condition. Ruptured hepatic artery aneurysm carries a high incidence of mortality. Traditionally, HAAs are treated with open surgical resection. Endovascular aneurysm exclusion is an alternative to open repair in selective patients who have suitable anatomy. We report a case of giant symptomatic HAA treated with covered stent placement.

DISCUSSION

- Endovascular treatment of hepatic artery aneurysm is an attractive alternative to open repair. Major advantages of endovascular repair is avoidance of laparotomy, decreased blood loss and early recovery.
- Various endovascular options for treatment include exclusion with covered stent placement and embolization of aneurysm sac. Each of these techniques however have unique drawbacks. Embolization of the sac is quite effective and definitive treatment, however, arterial flow deprivation to the liver can cause hepatic insufficiency.

CONCLUSION

- Hepatic artery aneurysm is a relatively uncommon type of mesenteric aneurysm. Large aneurysms require intervention as rupture carries a high risk of mortality. An individualized approach dependent upon the anatomy and functional status of the patient should be taken into consideration.