CASE REPORT

Multiple splenic artery aneurysms causing sinistral portal hypertension

Satchithanantham Vinojan¹, Gayan Bandara², Thushan Gooneratne², Subramaniyam Prasath³, Ranjuka Ubayasiri¹
¹Faculty of Medicine Jaffna, Sri Lanka
²Teaching Hospital Karapitiya, Sri Lanka

Keywords: Splenic artery aneurysm; portal hypertension; splenectomy

Introduction

Sinistral (left sided) portal hypertension is defined as a syndrome develops from splenic vein thrombosis due to primary pancreatic pathology. Splenic artery aneurysm (SAA) causing this type of portal hypertension is very rare and is due to aneurysm compressing the splenic vein. We present a case of a 58-year-old female with multiple giant splenic artery aneurysms causing left sided portal hypertension. She was successfully treated with aneurysmectomy with splenectomy.

Case presentation

A 58-year-old female presented with the history of on and off upper abdominal pain of 3 months duration. This pain was not related to the meal. She didn’t have any history of hematemesis or melena. On examination, she had moderate splenomegaly and no evidence of ascites or stigmata of chronic liver cell disease. Complete blood count revealed her platelet count was 60 000 dl and Haemoglobin was 8g/dl. Her liver function test was normal. Ultrasound scan showed normal liver echotexture with cavernous transform-ation in the portal vein with moderate splenomegaly. Contrast-enhanced CT abdomen revealed multiple splenic artery aneurysm involving the mid and distal part of the splenic artery ranging from 3- 7cm with splenic vein thrombosis and moderate splenomegaly. (Figure 1)Her screening test for hepatitis B and C was negative and serum ferritin was within the normal range. Grade I oesophageal varices with evidence of portal gastropathy was found in the upper gastrointestinal endoscopy.

As she was symptomatic and her aneurysms were >2cm, we decided to offer her surgery. Routine vaccination was given 2 weeks prior to the surgery and haematology opinion was sought out regarding the timing of platelet transfusion. We performed laparotomy with left sided L shape incision and accessed into the lesser sac. There were multiple SAA found in the mid and distal part of the splenic artery. (Figure 2)In the lesser sac, we ligated the splenic artery proximal to the aneurysms and transfused with 5 units of platelets followed by aneurysmectomy and splenectomy. (Figure 3) The patient had an uneventful recovery and was discharged on day 05.

Correspondence: Satchithanantham Vinojan
E-mail: vinojanfm@gmail.com
Received: 30-11-2019 Accepted: 12-04-2020
DOI: http://doi.org/10.4038/sljs.v38i1.8651

The Sri Lanka Journal of Surgery 2020; 38(1): 62-64
management of asymptomatic small <2cm aneurysms might be due to the lack of case series due to rarity of this aneurysm. Lakin RO et al in their series recommends serial imaging or even discharge of asymptomatic < 2cm SAA because of negligible risk of rupture [4].

One form of intervention was required for our patient because of the size and symptoms. The options available were either endovascular or open surgery. Endovascular options are transcatheter coil embolization, thrombin injection or covered endovascular stents. Injection methods can be used for narrow neck saccular aneurysms or the distal aneurysms. Stents are useful in the proximal aneurysms with spared distal artery. Even though the mortality rate is less compared to open surgery, the success rate is around 85% [5]. Our case is not suitable for either because it is giant involving proximal and distal part and caused mass effect.

Open surgical procedures may be aneurysm resection and reconstruction or aneurysmectomy combined with splenectomy. We had to do splenectomy because of the same reasons, aneurysms were involved in both proximal and distal arteries.

Conclusion

Even though SAA are the common visceral artery aneurysms, the incidence is rare. Left sided portal hypertension is usually caused by pancreatic pathology, but SAA also can cause it. Timely and planned surgical intervention for SAA with portal hypertension will prevent devastating complications such as rupture and erosion into adjacent structures.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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Learning Points:

- Splenic artery aneurysms is the third common intra-abdominal aneurysm
- It is the commonest visceral artery aneurysm
- It can be the cause for left sided portal hypertension