Aneurisma da veia mesentérica superior. Uma entidade rara, uma nova estratégia cirúrgica

Superior mesenteric vein aneurysm. A rare clinical entity, a new surgical approach

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RESUMO

Os aneurismas da veia mesentérica superior são uma entidade clínica extremamente rara com uma apresentação clínica variável e um curso clínico difícil de prever. Os autores apresentam o caso clínico de uma doente de 41 anos a quem foi diagnosticado incidentalmente em TC abdominal um aneurisma sacular da veia mesentérica superior. A doente foi submetida a aneurismectomia com agrafadora vascular. O pós-operatório decorreu sem incidentes. A doente encontra-se clinicamente bem dois anos após a cirurgia.

Palavras chave: *aneurisma, visceral, veia mesentérica superior, cirurgia, aneurismectomia.*

ABSTRACT

Superior mesenteric vein aneurysms are an extremely rare clinical entity, with a variable clinical presentation and an unpredictable clinical course. The authors present the case of a 41 year old female with a saccular superior mesenteric vein aneurysm incidentally identified on abdominal CT scan. The patient was treated with surgical aneurismectomy with a vascular stapler, and the postoperative recovery was uneventful. She is clinically well two years after surgery.

Key words: *aneurysm, visceral, superior mesenteric vein, surgery, aneurismectomy.*

INTRODUCTION

Venous visceral aneurysms are rare clinical entities where 90% of these are located in the portal venous system.[1] Aneurysms of the superior mesenteric vein are extremely rare with only a few reports in the literature.[1]

The aetiology of these venous malformations is not clearly understood; its clinical presentation is often variable, and a great proportion of patients are diagnosed incidentally.

As the number of cases of superior mesenteric vein aneurysm is small, the natural history and clinical

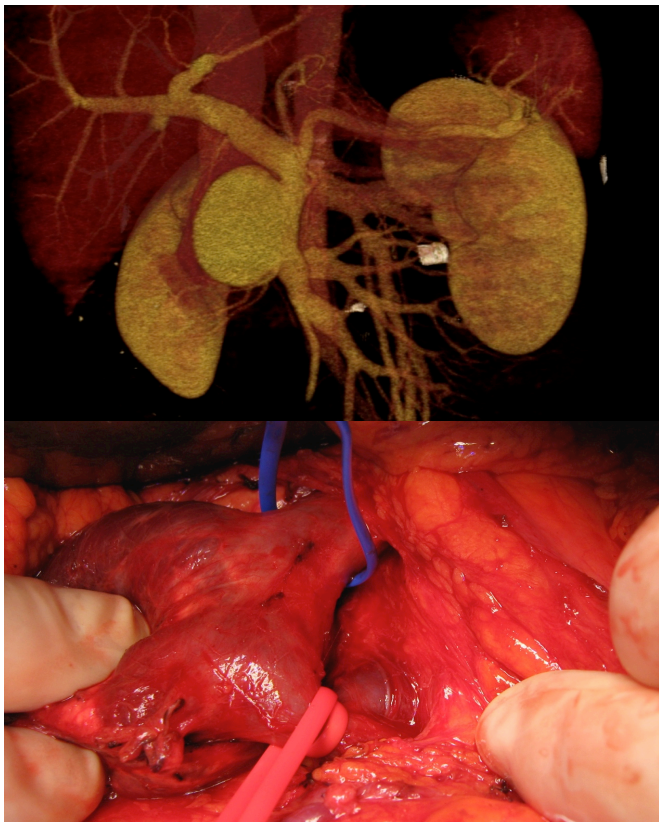

Figure 1 – **CT with 3D reconstruction and dissected aneurysm with proximal and distal control.**

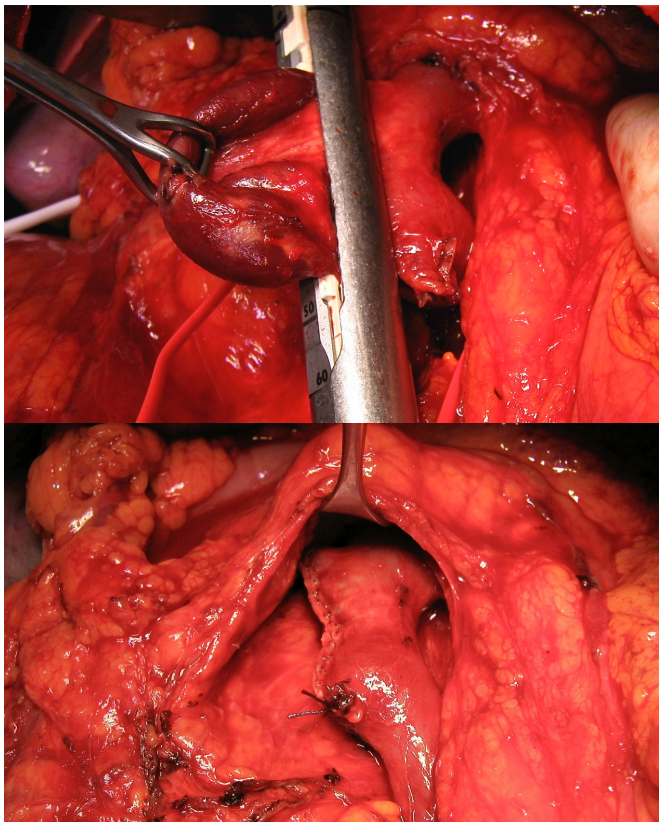

Figure 2 – **Aneurismal resection with vascular stapler and final result with visualization of the spleno-mesenteric junction.**

course are not well-defined. However, there are reported cases of thrombosis and rupture.[2,3]

The treatment remains controversial, and may vary between close observation, elective surgery or surgery, only when complications occur.[1]

CASE REPORT

The authors present the case of a 41 year old female, with two children and previously healthy, who presented to her primary care physician with hypertension. During the workup for a possible secondary cause for her high blood pressure, an elevated level of serum aldosterone was detected. This prompted an abdominal CT scan to check for the adrenal glands, which were both normal but the same CT scan revealed a 4cm saccular type superior mesenteric vein aneurysm. (Fig. 1)

The patient was proposed for a surgical repair of the aneurysm. After obtaining proximal and distal control of the superior mesenteric vein (Fig. 1), a vascular stapler was used to perform the aneurysmectomy (Fig. 2). Both surgery and the post-operative course were uneventful, and the patient was discharged on the fourth post-operative day.

A follow-up CT scan with angiography was performed one year after the surgery, which confirmed the patency of the vein as well as a normal flow. The patient is asymptomatic two years after surgery.

DISCUSSION

Aneurysms of the portal venous system are rare clinical entities, which account for approximately 3% of all venous aneurysms.[1,3] The latter are defined as

dilatations of more than 2cm[4,5], and their accurate incidence is difficult to define as most of them are found incidentally in asymptomatic patients. The growing recognition of these malformations is related to the increasing use of imaging investigations.

Aneurysms of the superior mesenteric vein account for approximately 9% of visceral venous aneurysms[1], and although this malformation's aetiology is yet to be determined, congenital and acquired theories[1,5] are accepted when discussing this. Some aneurysms are associated with portal hypertension and portal vein thrombosis but it is unclear if these are either the cause or the consequence of the aneurysm. There are also reports of patients with previous episodes of acute pancreatitis, and some believe that the local inflammatory response might be responsible for a weakness in the venous wall, leading to aneurysm formation. The report of these malformations in young patients without predisposing factors supports the congenital theory. Followers of this theory believe that incomplete regression of the distal right vitelline vein, during the development of the portal venous system leads to a diverticulum, which might develop into an aneurysm of the superior mesenteric vein.[1,5]

The most frequent symptom in symptomatic patients is abdominal pain, which is usually located in the upper right quadrant.[1,5] A few cases presented as gastrointestinal bleeding due to esophageal varices[6], rupture of the aneurysm and obstructive jaundice due to compression of the common bile duct also occurred.[7] Liver function tests can show an elevation of bilirubin levels, which are related to an underlying liver disease or compression of the common bile duct.

Image studies, particularly CT and MRI, are extremely important in pre-operative workup, and diagnosis by image techniques appears as the first line of investigation. On abdominal ultrasounds the aneurysm appears as an anechoic structure on the superior mesenteric vein. CT and MRI scans will complement the information by revealing the aneurysm's size, shape and extent of the aneurysm. According to their shape, aneurysms can be classified as saccular, fusiform or diverticular.

The treatment of these malformations is still controversial, and may vary from close observation, endovascular repair or open surgery.[1] There is a correlation between the size of the aneurysm and the predisposition to develop symptoms, as well as with a greater risk of complications. However, there is still no consensus as to how much the aneurysms should be allowed to grow, until the need to operate is recognized.

Considering the possible complications – thrombosis, rupture and compression of adjacent structures – and the unpredictability of the clinical course, it is the author's opinion that surgical repair should be performed in the young and fit patients, whereas watchful waiting should be reserved for patients with high surgical risk.

Surgical options include aneurysmectomy and patch angioplasty or resection with graft interposition.[5] We describe an innovative technique consisting of aneurysmectomy with a vascular stapler as this technique is simpler to perform, and avoids unnecessary clamping time as well as the interposition of prothesic material. This proved to be a safe and effective technique in some of these patient's treatment.

CONCLUSIONS

Superior mesenteric vein aneurysms are rare and its treatment remains controversial. Surgical therapy should be privileged in the young and fit patient.

Surgical resection of saccular type aneurysms with a vascular stapler should be considered as a simple, safe and effective alternative to resection with patch angioplasty or graft interposition.

REFERENCES

1. Sfyroeras GS et al, "Visceral venous aneurysms: clinical presentation, natural history and their management: a systematic review", Eur J Vasc Endovasc Surg, 2009, 38: 498-505
2. Smith TJ et al, "Superior mesenteric vein aneurysm rupture." Vasc Endovascular Surg, 2011; 45(6):559-60
3. Hechelhammer L et al, "Thrombosis of a superior mesenteric vein aneurysm: transarterial thrombolysis and transhepatic aspiration thrombectomy." Cardiovasc Intervent Radiol, 2004; 27(5):551-5
4. Koc Z et al, "Portal venous system aneurysms: imaging, clinical findings, and a new etiologic factor" Am J Roentgenol, 2007, 189(5): 1023-30
5. Truong T et al, "Superior mesenteric vein aneurysm: a case report." Vasc Endovascular Surg, 2012; 46(1):89-92
6. Anjana V et al, "A rare case of Superior Mesenteric Vein Aneurysm secondary to Portal Hypertension" Int J Clin Med, 2013, 4:66-8
7. Nelson W et al, "Aneurysm of superior mesenteric vein: Case report with 5-year follow-up and review of the literature" J Vasc Surg, 2004, 39:459-61

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