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Challenging Case of Giant Splenic Artery Aneurysm: A Case Report

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Abstract

Splenic Artery Aneurysms (SAA) are one of the most frequent intraabdominal aneurysms. They are mostly asymptomatic unless they rupture with a mortality rate of 25%. Traditionally, surgery is used to treat SAA. However, non-surgical, endovascular techniques are also suitable alternatives. We present a 51-year-old woman with preumbilical abdominal pain diagnosed as splenic artery aneurysm which was managed by stent graft placement. o detect the changes in cardiac function during both normal and high-risk pregnancy.

INTRODUCTION

Splenic artery is the most common origin for visceral artery aneurysm [1, 2]. The rupture is the regular history of any intra-abdominal aneurysm. So, in patients who are otherwise well, treatment should be assumed as soon as the diagnosis is prepared. Treatment of Splenic Artery Aneurysm (SAA) depends on several factors counting age, gender, aneurysm dimension, origin and the severity of the clinical findings and their complications [3]. Close follow-up for small aneurysm and open surgery for giant ones are used to treat SAA. Laparoscopic removal of aneurysms or endovascular intervention of aneurysms for proximal or mid part of the artery are new options that are presented [3-5]. For most distal lesions, splenectomy has been the most commonly done operation. Endovascular exclusion including percutaneous injection, trans-catheter coil embolization, and stent grafting of splenic artery aneurysm has been used recently with great accomplishment [3]. The purpose of this study is to present a 51-year-old woman with preumbilical abdominal pain diagnosed as splenic artery aneurysm.

CASE PRESENTATION

A 51-years-old woman is reported with vague preumbilical abdominal pain that started about 45 days earlier she referred. This pain first was ambiguous and slowly caused more discomfort and irregularly was a sharp pain without radiation. The patient didn't have nausea, vomiting or any other gastrointestinal complaints except early satiety. There was not any appetite was normal. Imaging studies were done for the patient. Sonography was done and showed a huge splenic artery aneurysm in the middle portion of the

artery; The CT (computed tomography) angiography revealed a splenic artery aneurysm with a 12 centimeter diameter, originated from midportion of splenic artery (Fig 1).

Endovascular surgery was planned. The procedure was performed under local anesthesia and conscious sedation. Left brachial artery was punctured and a 5 French arterial sheath was placed. Catheterization of splenic artery was done after the navigation of 0.35 hydrophilic wires with multipurpose catheter. Then, under the roadmap technique, distal portion of splenic artery was cannulated. At the second stage 60 cm 8 French sheath was placed into the splenic artery through abdominal aorta, celiac, and splenic arteries with stiff lunderquist wire support. Two 7mm_57 mm V12 stent graft was navigated over the wire and deployed in splenic artery at the aneurysmal portion. The patient was discharged from the hospital after 2 days without any complication. Follow up CT scan after one month showed complete thrombosis of aneurysm and normal flow to spleen (Fig 2).

DISCUSSION

Although visceral artery aneurysms are relatively uncommon, SAA estimated for about 60% of all reported visceral aneurysms. SAA are found much frequently in women than men particularly those with a history of multiple pregnancies [6]. The other clinical risk factors are portal hypertension, and less common conditions including polyarthritis nodosa, systemic lupus erythematous, and anomalous origin of splenic artery [6, 7]. SAAs are asymptomatic unless they rupture. Most these aneurysms are found

parenthetically by diagnostic imaging performed for other unrelated symptoms Vague abdominal pain related to the compression of adjacent structures or significant pain sensation due to rupture of acute

development SAAs are also reported [8]. MRI and MRA are more sensitive and specific diagnostic tools but abdominal ultra-sonography and CT are mostly use for diagnosis [3].

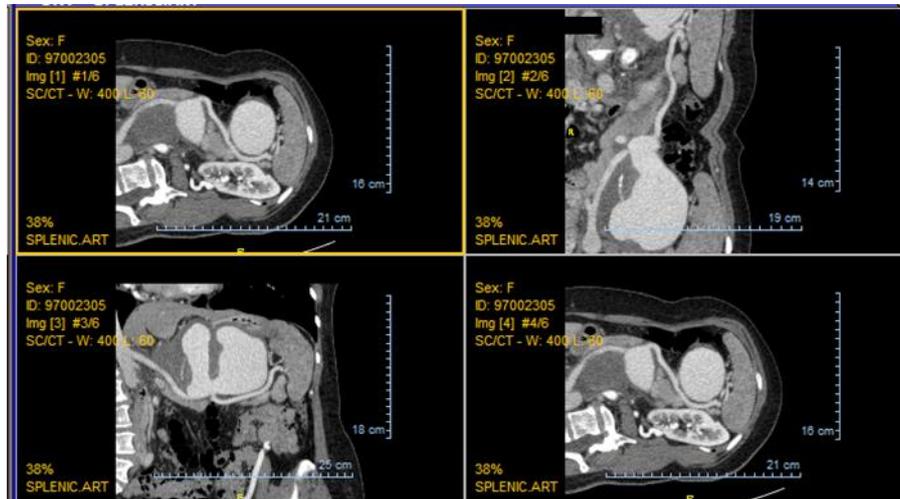


Figure 1: CT scan of Splenic Artery Aneurysm before Intervention

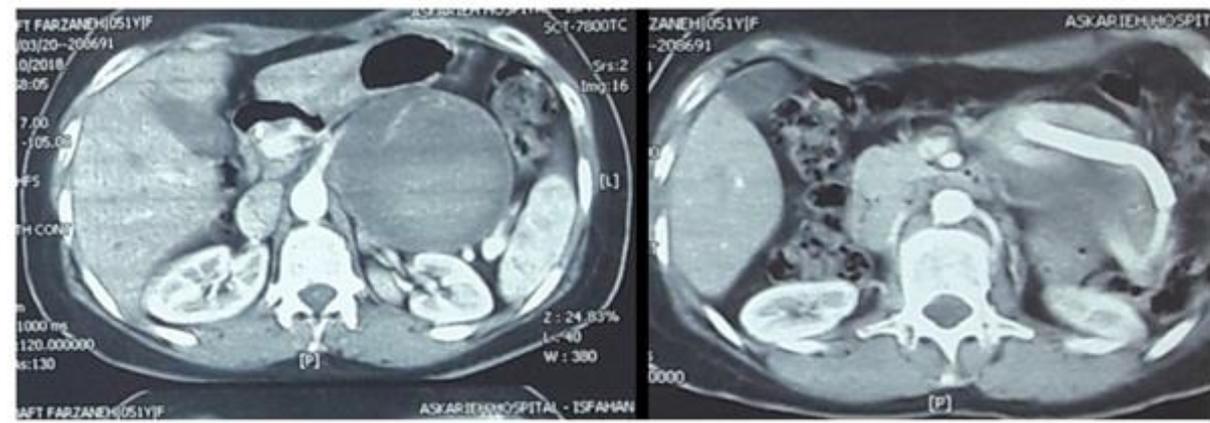


Figure 2: CT scan of Splenic Artery Aneurysm after Intervention

The true rate of SAA rupture is difficult to determine. It seems to be more than 25% for giant aneurysms with a mortality rate of 25%. So, immediate therapy is essential for aneurysms bigger than 2 cm or symptomatic ones [9, 10]. Traditionally, surgery is used to treat SAA. However, non-surgical, endovascular techniques are also suitable alternatives with the success rate of 80 to 92%, especially for patients with a high risk of surgical complications and for patients with lesions that are difficult to treat surgically such as those with bigger than 2 cm in diameter [11, 12]. Endovascular treatment options, such as percutaneous injection, trans-catheter embolization, and endovascular stent grafts are playing an increasing role in the treatment of these patients. Endovascular stenting self-expanding or balloon-expanding ones is the most recent technique with less splenic infarction or abscess complications in comparison to coil embolization [13].

CONCLUSIONS

In conclusion, we believe that endovascular approach is the preferred choice for treatment of SAA and offers an opportunity of treatment especially to patients with a high risk of surgical complications, especially in major specialized centers. Placing a super-stiff guidewire may facilitate stent graft delivery.

Conflicts of Interest

None declared.

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