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Case Report

Rare case report of ruptured splenic artery pseudoaneurysm: a complication of chronic pancreatitis

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ABSTRACT

Splenic artery pseudoaneurysm is a rare complication of chronic pancreatitis. It is a life-threatening complication that can be fatal if missed both clinically and radiologically. While the diagnosis of chronic pancreatitis is straight forward, identifying associated vascular complications like splenic artery pseudoaneurysm can be challenging, often leading to diagnostic dilemma. The same can result in fatal complications and delayed treatment, thus contributing to both morbidity and mortality. We present the case of 37-year-old male who presented to us with two weeks history of left upper abdominal pain in the background of chronic pancreatitis. The patient was managed conservatively using microcoil embolization and was discharged in stable condition. Our case report aims to highlight the importance of recognizing this infrequent complication of chronic pancreatitis in the setting of acute abdomen. The case report also emphasises the role of newer imaging techniques and interventions in its prompt diagnosis and management.

Keywords: Splenic artery pseudoaneurysm, Chronic pancreatitis, Microcoil embolization

INTRODUCTION

The abnormal aneurysmal degeneration of the branches of abdominal aorta is rare. The same results as a complication of pancreatitis both acute and chronic. The augmented use of ultrasonography and cross-sectional imaging for intraabdominal pathology has raised the incidental finding of visceral artery pseudoaneurysms.[1] The common etiologies of splenic artery pseudoaneurysm include pancreatitis, trauma, iatrogenic and occasionally peptic ulcer disease.[2] Historically most of the unruptured splenic artery aneurysms are asymptomatic. Symptoms may ensue once rupture occurs. Initial reports of splenic artery aneurysm leading to rupture is about 10%.[3] The typical clinical presentation of a ruptured splenic artery aneurysm includes abdominal pain, hemodynamic instability, and gastrointestinal bleeding. The sudden onset of left upper abdominal pain in the background of chronic pancreatitis usually indicates rupture has occurred.[4] The risk of rupture of a splenic artery pseudoaneurysm can be as high as 37% and the mortality due to the same may reach up to 90% when untreated.[5,6] Prompt diagnosis and treatment are therefore critical in the management of these patients. Our case highlights the importance of suspecting splenic artery pseudoaneurysm in the differential diagnosis of patients presenting with chronic pancreatitis and acute abdomen, and the role of multimodal imaging techniques in the evaluation and management of the same.

CASE REPORT

A 37-year-old male came to medical emergency with complaint of pain left upper abdomen since past 15 days. The pain was sudden in onset, gradually progressive and

was radiating to back. It was aggravated after having meals and on bending forward. The pain was partially relieved on taking over the counter medications. Patient was chronic alcoholic since 10 years and had no other comorbidities.

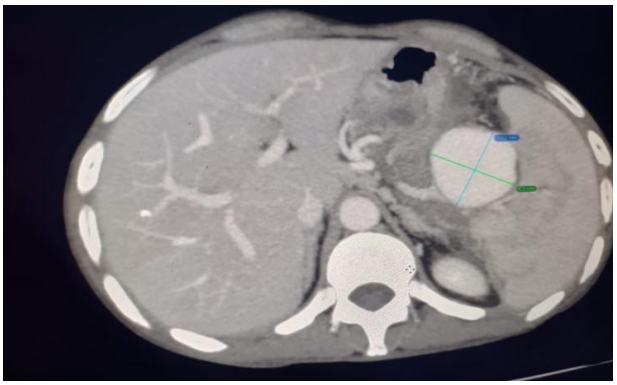

Figure 1: CT abdominal angiography showing pseudoaneurysm of splenic artery with features of chronic pancreatitis.

On examination the patient was conscious and oriented, thin built with stable vitals. Per abdomen examination showed tenderness over left upper quadrant with mild splenomegaly. Rest of the systemic examination was normal. An initial ultrasound abdomen was suggestive of enlarged spleen (14.41cm) with pseudoaneurysm of size 5×4 cm noted in splenic hilum, arising from splenic artery with changes of chronic liver disease and signs of chronic pancreatitis. To further evaluate the extent of vascular involvement a CT angiography of the abdomen was performed which showed a 4.4×4.2 cm (Figure 1) splenic artery pseudoaneurysm involving the region of pancreatic tail, upper pole of spleen with hematoma arising from mid and distal third of splenic artery with narrow neck. The patient was urgently taken for angiographic intervention where microcoil embolization was performed to occlude the splenic artery pseudoaneurysm.

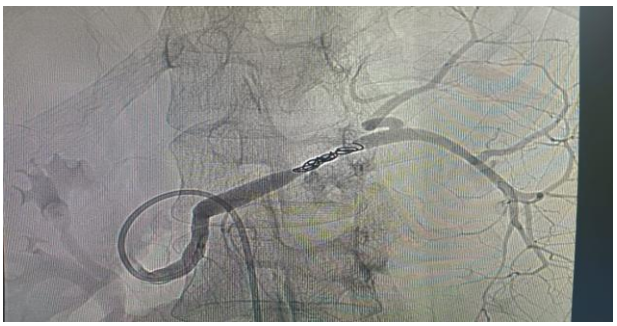

Figure 2: Showing the post coil embolization of pseudoaneurysm.

The patient's symptoms improved in the immediate post-operative period and he was discharged in a stable condition after a stay of 1 week. The follow up was done every fortnightly. The patient had marked clinical improvement with no symptoms during follow up OPD visits. The follow up scans showed the coil in place and resolution of both hematoma and pancreatitis.

DISCUSSION

Chronic pancreatitis, characterized by continuous inflammation and fibrosis of the pancreatic parenchyma, is a well-established risk factor for the development of splenic artery pseudoaneurysms. The pathogenesis involves the release of inflammatory mediators during episodes of pancreatitis, which can erode and damage the arterial wall, leading to formation of a false aneurysm.[9] The splenic artery is particularly vulnerable due to its close proximity to the pancreas and the rich collateral blood supply in the area.[7,8]

The diagnosis of these pseudoaneurysms can be challenging, as they may remain asymptomatic until rupture resulting in symptoms of acute severe abdominal pain, gastrointestinal bleeding, or even haemorrhagic shock. In our case, the patient's history of chronic pancreatitis and the findings on abdominal imaging, including an enlarged spleen and a pseudoaneurysm in the splenic hilum, were key to the diagnosis. Imaging modalities such as computed tomography angiography and digital subtraction angiography play a crucial role in the evaluation and management of splenic artery pseudoaneurysms. The treatment of choice for these lesions is typically endovascular intervention, such as coil embolization or stent-graft placement, which can effectively occlude the pseudoaneurysm and prevent rupture.

CONCLUSION

In conclusion, this case highlights the importance of maintaining a high index of suspicion for splenic artery pseudoaneurysms in patients with chronic pancreatitis who present with abdominal pain.

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