

Case Report

Ruptured internal iliac artery aneurysm presenting with massive lower gastro intestinal haemorrhage

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ABSTRACT

A patient presenting with massive Lower Gastro Intestinal Haemorrhage (LGIH) in the tropics is most likely to be a young individual commonly bleeding from nonspecific or enteric ulcers. In contrast the western patient with massive LGIH is likely to be an elderly individual bleeding from diverticulosis or angiodysplasia. Recently we managed a patient with a ruptured large pararectal aneurysm arising from the right internal iliac artery presenting with an exsanguinating rectal bleed.

Keywords: Internal iliac artery aneurysm, LGI bleed, Ruptured

INTRODUCTION

A 70 year old male presented with complaints of intermittent bleeding per rectum of three months duration. Initially the bleeding was a painless, intermittent and spotting type. There was no constipation, abdominal pain or hematemesis. There was no history suggestive of atherosclerotic disease in the form of Hypertension, Coronary artery disease or Cerebrovascular accident. He had no other comorbidities and was not on anti-inflammatory or antiplatelet agents. He also did not give any prior history of major vascular surgery. A month into his bleeding he underwent a stapled haemorrhoidectomy outside. He continued to bleed intermittently post haemorrhoidectomy and needed multiple blood transfusions over the next three months. He presented to our casualty on a Saturday evening with a fresh bout of bleeding per rectum. He looked pale on examination, with a pulse of 108/min and BP of 90/60 mm Hg supine. A rectal examination showed fresh blood on the examining finger. Haemoglobin on admission was 6 gm%. He was admitted under Gastroenterology service in intensive care and resuscitated. Two units of packed

red blood cell were transfused. He responded well to initial treatment and underwent a Colonoscopy the next day. This showed a well healed stapler line of previous haemorrhoidectomy. Fifteen centimeters proximally was a 5x5 cm pulsatile lesion on the right rectal wall (Figure 1). There was another similar lesion 5cms proximal to the first. The lesions were not bleeding at the time of Colonoscopy and the rest of the colon was normal.

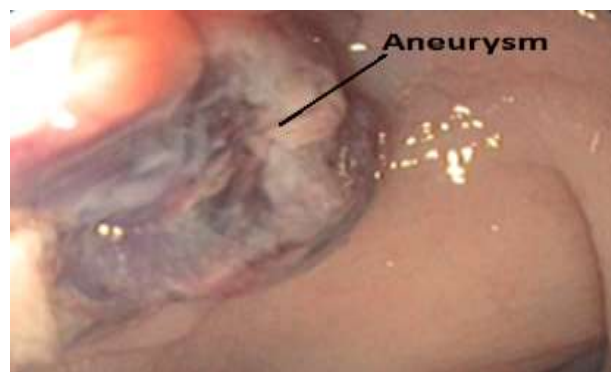


Figure 1: Colonoscopy showing a pulsatile aneurysm along the rectal wall.

A CT Angiography was planned. Even as he was being transferred to the CT room he had a sudden bout of massive bleeding per rectum and collapsed due to haemorrhagic shock. This exsanguinating bleed occurred in front of the operating room (OR) and the Surgical Registrar serendipitously happened to be nearby. This amazing coincidence saved the patient's life. He was immediately wheeled to the OR in view of his hemodynamic status and even as intensive resuscitation was continued a midline laparotomy revealed a pulsatile mass deep in the pelvis adjoining the right rectal wall. A soft clamp was applied to the right common iliac artery. The mass stopped pulsating. The origin of the right internal iliac artery was quickly identified and clamped, following which the patient stabilised. Further dissection revealed a large cricket ball size aneurysm burrowing through the right rectal wall. The right ureter was entrapped within the aneurysm wall (Figure 2). Right internal iliac artery was ligated. A low anterior resection along with aneurysm excision and right ureteric re-implantation with a diverting colostomy was done (Figure 3, 4). The patient made an uneventful recovery.

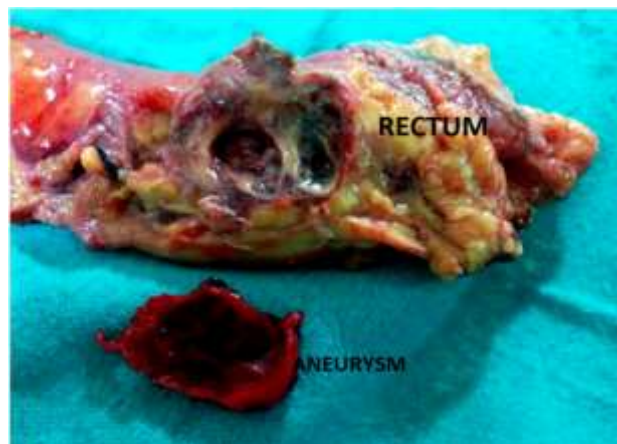


Figure 4: Specimen of the excised rectum and the internal iliac artery aneurysm.

Subsequent work up did not reveal any evidence of hyperlipidemia, atherosclerosis or any another aneurysm in this elderly male from India. Eight weeks later a stapled colorectal anastomosis was done.

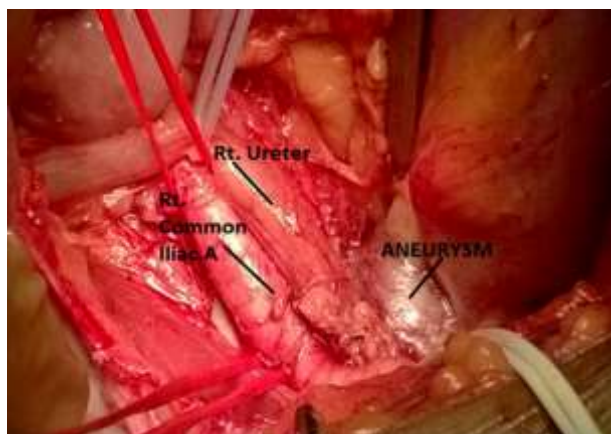


Figure 2: Intraoperative picture showing an aneurysm along right rectal wall with lower end of right ureter adherent to the aneurysm.

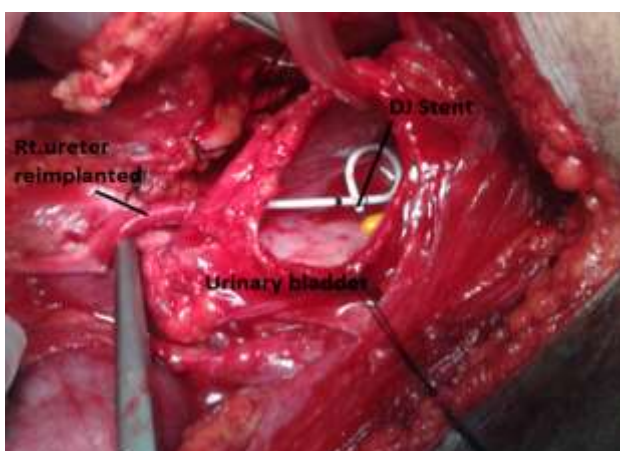


Figure 3: Right ureter re-implanted to the urinary bladder with DJ stent.

DISCUSSION

An extensive search of literature reveals that massive lower GI bleed due to rupture of isolated IIA aneurysm into the rectum is very rare.^{3,4} Aneurysms secondary to atherosclerosis are quite frequently encountered in the west but are uncommon in patients in the developing world. Isolated aneurysms in the region of internal iliac artery are rare even in the west. They comprise 0.3-0.4 % of all intra-abdominal aneurysms.⁵ They are six times more common in males over the age of 60 years and usually arise secondary to atherosclerotic degeneration. They may also arise following trauma during child birth, secondary to mycotic or bacterial infections and connective tissue disorders. In 10-20% cases they coexist with abdominal aortic aneurysms.⁵ In our patient there was no evidence of atherosclerosis or any other aneurysm.

Majority of internal iliac artery aneurysms are asymptomatic to begin with. They are located deep in the pelvis and become symptomatic much later when they grow in size to make their presence felt. Symptoms are secondary to compression, fistulation or rupture of the aneurysm into adjacent pelvic structures. They can present with hypoaesthesia, lower limb neurological deficit, urinary retention or pulsatile micturition. Sudden onset of lumbo-sacral back pain with radiation in the distribution of the lumbo-sacral plexus and haemodynamic compromise is highly suggestive of leakage or rupture. Obstruction of the ureter may occur secondary to compression at the pelvic brim or due to intense peri-aneurysmal desmoplastic reaction as was seen in our patient. Internal iliac artery aneurysms are rarely palpable on per abdominal or per rectal examination.⁶ Reports of rupture of such aneurysms into

the adjacent ureter causing massive hematuria have been reported frequently however majority of these occur in pseudo-aneurysms which have developed post vascular repair.¹¹ Isolated IAA rupturing into the rectum have been rarely reported.¹² Li Scetal reports endoscopic diagnosis of IAA aneurysms in patients with graft enteric fistula.¹³ Our case is unique for being one of its kind where isolated IAA bulging intraluminally was diagnosed endoscopically.

It has been projected that aneurysm expansion occurs in 36% of patients at a rate of 4 mm/yr.⁷ In most surgical series the average size of ruptured iliac aneurysm has been estimated to be 6 cm.⁸ Current consensus is to treat all aneurysms with a threshold diameter of >3cm either by surgical or endovascular means. In our case also the size of the collapsed aneurysm was more than 5cm. Operative mortality for ruptured aneurysms is very high (58%).⁵ Endovascular means to manage such aneurysms have been mentioned in literature with low morbidity and mortality.^{9,10} However this approach has not shown to relieve obstructive symptoms of secondary to the aneurysm and its long term results are questionable. In our case sheer paucity of time and patients clinical condition did not grant us the luxury to consider an endovascular approach.

CONCLUSION

Rupture of an isolated internal iliac artery aneurysm into the rectum causing torrential bleed per rectum is very rare and catastrophic and demands immediate intervention. Endoscopic diagnosis of isolated IAA is possible. One should be aware of such an unusual cause of massive lower GI bleed. Prompt surgical intervention is the best answer for such a patient as one may not always have the leisure of time to wait for an endovascular approach.

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