

## Superior Mesentric Arteryocclusion Presenting as Pain AB Domen

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### Abstract

Superior mesenteric artery thrombosis (SMA) is a rare but potentially fatal disease. With the rapid increase in imaging modalities for patients with abdominal pain like biphasic CT scan<sup>1</sup> and multidetector biphasic CT angiography<sup>2</sup>. There are two main intervention strategies for treatment of acute superior mesenteric artery occlusion namely endovascular revascularization of superior mesenteric artery and open surgery where the favourable outcome was more with endovascular revascularization therapy when compared to open surgery.<sup>3</sup>

**Keywords:** Superior Mesenteric Artery; Occlusion; Pain abdomen.

### Introduction

Acute occlusion of the superior mesenteric artery (SMA) is a devastating disease with a high mortality rate. The most common cause is thromboembolism from the heart or from an aortic aneurysm. In this case report, a woman who sustained acute intraluminal occlusion of the SMA from a very large thrombus extending from the aortic arch with atherosclerotic changes and occlusion of right renal artery

### Case

A 58 year old female patient was brought to the Emergency department with complaints of moderate to severe abdominal pain for the last 4 days, took over the counter medications for pain relief but pain did not subside, associated with

vomiting but no fever. Patient pain score was 8/10. On clinical examination, generalised abdominal tenderness was present with excess tenderness over right lumbar and iliac region, McBurney's point tenderness was present, rebound tenderness was present. A provisional diagnosis of appendicitis alongwith doubtful ruptured appendix was made and management was started.

Initial USG abdomen report had no findings of appendicitis as appendix was not visible, neither renal colic nor bowel obstruction. This raised the doubt of retrocaecal appendicitis. Renal profile was sent for creatinine level clearance and patient was taken for contrast enhanced CT abdomen.

Contrast Enhanced CT abdomen revealed atherosclerotic changes in aortic arch with



extension of plaque/thrombus intraluminally into the Superior Mesenteric Artery and right renal artery

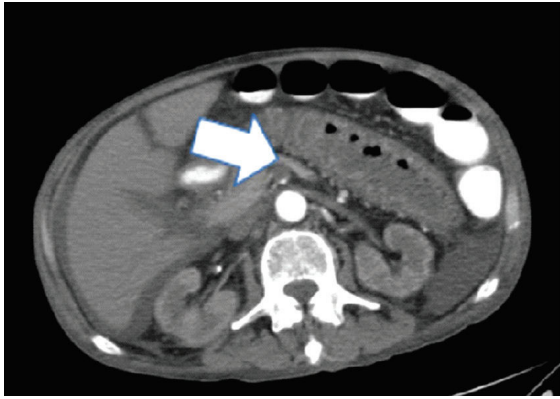


Fig. 1: Patient recovered well and was discharged home.

Patient was taken for immediate thrombolysis with Actilyse infusion (alteplase) Diagnostic laparotomy was done in the later period and was found to have approximately 1 metre of distal ileum, caecum and ascending colon gangrene with thrombus in SMA branches, resection and anastomosis done.

## Discussion

Acute mesenteric ischaemia is a medical emergency and needs timely intervention for the survival of the patient. Females are more commonly affected by the disease when compared to males.<sup>5</sup> The most common cause of mesenteric ischaemia is arterial thrombosis when compared to venous thrombosis.<sup>4</sup> The most common presenting clinical feature is pain abdomen not relieved by any analgesic medications. The most specific imaging modality for diagnosing mesenteric ischemia is CT angiography.<sup>6</sup> The diagnostic sensitivity and specificity of CT angiography is 96 % and 94 % according to<sup>1</sup> Kirkpatrick. The prognosis of the disease depends on the type of occlusion – thrombotic or non-thrombotic<sup>5</sup> and between the vessel involved – artery or vein.<sup>4,5</sup> The prognosis of the disease is widely dependent on early diagnosis and immediate intervention for mesenteric ischaemia but the major challenge that is faced by the emergency physician for diagnosing acute mesenteric ischaemia is non-specific symptoms<sup>5,6</sup> and various potential common differentials.

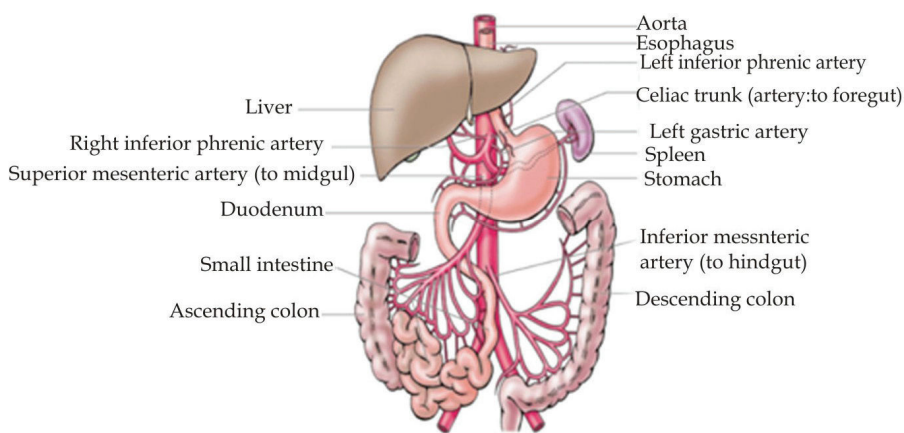


Fig. 2: Blood supply of the GI tract.

## Conclusion:

Acute mesenteric ischaemia due to Superior mesenteric artery occlusion is a rare but fatal disease and must be suspected in patients having pain in the abdomen not getting relieved by analgesic drugs and abdominal ultrasonography reveals no other abdominal pathologies. CT angiography of the abdomen is the diagnosis of choice in these patients.

Timely intervention with endovascular revascularization of the superior mesenteric artery is more valuable than open surgery.

The prognosis of the disease remains poor but timely diagnosis and early intervention has shown to have better outcomes and reduced mortality among the patients.

## Reference

1. Kirkpatrick LD, Kroeker MA, Greenberg HM. Biphasic CT with mesenteric CT angiography in the evaluation of acute mesenteric ischemia: initial experience. *Radiology*. 2003;229:91–98. doi: 10.1148/radiol.2291020991. [PubMed] [CrossRef] [Google Scholar]
2. Evaluation of acute mesenteric ischemia: accuracy of

- biphasic mesenteric multi-detector CT angiography  
A J Aschoff 1, G Stuber, B W Becker, M H K Hoffmann, B L Schmitz, H Schelzig, T Jaeckle
3. Endovascular and open surgery for acute occlusion of the superior mesenteric artery. Block TA, Acosta S, Björck M.J Vasc Surg. 2010 Oct;52(4):959-66. doi:10.1016/j.jvs.2010.05.084.PMID: 20620006
  4. Kairaluoma MI, Karkola P, Heikkinene D, Huttunen R, Larmi TK. Mesenteric infarction. Am J Surg. 1977;133:188-193. doi: 10.1016/0002-9610(77)90078-2. [PubMed] [CrossRef] [Google Scholar]
  5. Acute thrombosis of the superior mesenteric artery in a 39-year-old woman with protein-S deficiency: a case report Nicola Romano,1 Valerio Prosperi,1 Giancarlo Basili,1 Luca Lorenzetti,1 Valerio Gentile,1 Remo Luceretti,1 Graziano Biondi,1 and Orlando Goletti1
  6. Giulini S, Bonardelli S, Cangiotti L, Floriani M, Cervi GC, Portolani N, Tiberio G. Factors affecting prognosis in acute ischemia. Int Angiol. 1987;72:157-182. [PubMed] [Google Scholar]

