Acute mesenteric ischemia in an adolescent – a rare case report

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Introduction

Acute mesenteric ischemia is relatively an uncommon condition accounting for 1-2% of all cases of acute abdomen [1]. It usually occurs in elderly patients with underlying predisposing factors. Acute mesenteric ischemia accounts for less than 1 in every 1000 hospital admission [2]. Mesenteric venous thrombosis accounts for 5-15% of all acute mesenteric ischemia [3]. Mortality is around 30% [3] and it increases with delay in diagnosis and management. Early surgical intervention is important and an aggressive approach may become essential. We report a rare case of acute mesenteric ischemia in an adolescent due to mesenteric vein thrombosis.

Case report

A 15 year old girl presented with history of low grade fever for 4 days, vomiting and diarrhea for 3 days, pain abdomen since 2 days and blood in the stools since one day. There was no history of jaundice, chest pain, cough and dyspnoea. She was recently diagnosed to have erythema multiforme and was on steroids from one month.

On examination, she had pallor. Her pulse was 140/min, blood pressure of 124/76 mmHg and respiratory rate of 24

/min. She was febrile. Patient had erythematous skin lesion over both lower limbs.

Her abdomen was grossly distended. There was tenderness in all the 4 quadrants along with rebound tenderness. Bowel sounds were absent. There was no guarding or rigidity. Per rectal examination showed blood stained gloved finger. Proctoscopic examination showed the rectal lumen to be filled with blood.

Respiratory system examination revealed bilateral basal crepitation. Cardiovascular examination was normal.

Investigations showed haemoglobin of 4.1g%, white blood cells-19600, platelet 58,000, Blood urea-31mg%, S.creatinine-1.3mg%, Prothrombin time-18.9, INR-1.7, LDH-3198 U/L, Serum electrolytes were normal. IgM for dengue and leptospira were negative.

Chest X ray showed bilateral pleural effusion. Ultrasound revealed gross ascities, shrunken liver with coarse echotexture and no colour filling in splenic and portal vein.

CT abdomen showed portal, splenic and superior mesenteric vein thrombosis [Figure 1A & 1B see below] causing long segment bowel thickening, ascities and bilateral effusion with basal atelectasis.

After resuscitation with IV fluids and blood transfusion, patient underwent exploratory laparotomy which showed grossly dilated gangrenous small bowel [Figure 2]. The gangrene extended from fourth part of the duodenum to 2 cm proximal to ileocaecal junction. There was 2.5 litres of blood stained ascitic fluid. Her [illegible] was closed due to extensive small bowel gangrene and she was shifted to ICU where she died the next day.

Figure 2 Showing gangrenous small bowel

Discussion

Mesenteric vein thrombosis is relatively uncommon compared to other types of mesenteric ischemia. It can be primary or secondary with around 75% of patients having some form of inherited thrombotic disorder [4]. A past history of deep venous thrombosis or pulmonary embolism will be present in more than 50% of the patients [1]. Mesenteric vein thrombosis also occurs postoperatively, after trauma or use of oral contraceptives [5].

Clinically, the onset of the mesenteric venous occlusion is insidious and causes vague symptoms, which usually worsen leading to peritonitis [5]. CT scan often reveals the presence of thrombus in the vessel, thickening or gas in the bowel wall [4].

Exploratory laparotomy is often needed in case of peritonitis and all the infarcted bowel should be resected. An end to end bowel anastomosis or stoma may be done. Occasionally, a relook laparotomy may be required. Patients who survive will require long term anticoagulation.

Conclusion:

Acute mesentric ischaemia is a surgical emergency and it is rare in adolescents. The mortality in mesenteric venous thrombosis remains high and early surgical intervention is the key to the successful management of this condition. Life long anticoagulation is essential for the patients who survive.

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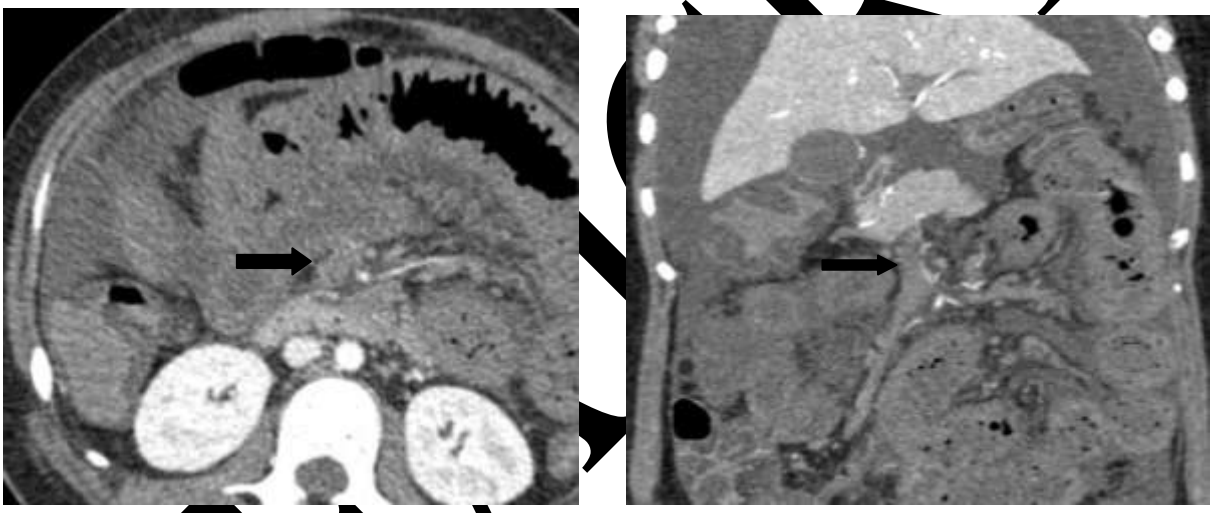
Figure 1: Showing Axial (A) and Coronal (B) post contrast CT images in the portal venous phase showing Superior Mesenteric Vein thrombosis (black arrow)



1A **1B**