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Splenic infarction -Presenting a rare case report of large bowel obstruction

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ABSTRACT

ABSTRACT: Large bowel obstruction is mainly caused by malignancy, diverticulum, intususseption or volvulus. Management requires early evaluation. Here we present a rare case of splenic infarction causing large bowel obstruction.

CASE: A 49 year old presented in the trauma centre of P.G.I.M.S. Rohtak, complaining of non- passage of flatus and stool since 10-12 days, and pain around the periumbilical region for 4 days.

DIAGNOSIS: The diagnosis of peritonitis and colonic obstruction was made based on clinical and radiological findings.

INTERVENTION: We performed emergency laparotomy and found that splenic infarction led to adhesions of the splenic flexure and caused pressure effects leading to colonic obstruction. The patient underwent splenectomy.

OUTCOME: The patient was discharged from P.G.I.M.S. Rohtak hospital on the 7th postoperative day, passing flatus and stool and accepting orally.

LESSONS: Splenic infarction and its complications are rare.

This entity should be in the differential diagnosis of an acute abdomen. In cases of acute abdomen with critical condition situation, emergency surgical intervention is necessary for timely diagnosis and treatment.

Keywords: Splenic infarction, acute abdomen, large bowel obstruction

INTRODUCTION

Splenic infarction is caused by occlusion of splenic artery or one of its branches. Presenting as acute abdominal pain with occasional complications such as haemorrhagic shock, infection, peritonitis, intestinal obstruction.¹

Here we report a rare case of colonic obstruction caused by an infarcted spleen.

CASE REPORT

A 49 year old male was admitted to our emergency department with complaint of non-passage of flatus and stool for 10-12 days and pain around the periumbilical region for 4 days. On admission the patient had tachycardia (pulse rate-96/min),

respiratory rate was 28/min and was afebrile having a temperature of 38.5°C.

Physical examination revealed fullness of left upper quadrant, there was tenderness on palpation of the whole abdomen. The bowel sounds, on auscultation, were absent.

Laboratory examination revealed total leucocyte count of 25,000 cells/mm³, with differential leucocyte count of 90/7/2/1, blood urea was 15 mg/dl, blood sugar was 115 mg/dl, serum creatinine was 0.8 mg/dl, serum amylase was 253 U/L, serum sodium and potassium were 124 mEq /L and 3.7 mEq/L respectively.

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His haemoglobin was 7.2 gm/dl, INR was 1.3 and platelet count was 4.2 lakhs.

Patient had past history of tuberculosis of the spine 25 years back for which he took ATT (antitubercular therapy) for 2 years duration.

He later developed ankylosing spondylitis and became bedridden. He was also operated for bilateral hip replacement.

X ray abdomen showed multiple air fluid levels, with signs of obstruction Ultrasonography showed small amount of free peritoneal fluid. We made the diagnosis of peritonitis and intestinal obstruction and performed an emergency laparotomy.

On exploration, around 500 ml of haemorrhagic fluid was present in the peritoneal cavity, the spleen was totally infarcted and necrosed. Splenic flexure showed pre gangrenous changes. The small bowel was normal.

The diagnosis of splenic infarction causing large bowel obstruction was made intraoperatively. Splenectomy was done and sent for biopsy. Patient made an uneventful recovery and was discharged on the seventh postoperative day.



Figure 1: Plain radiograph of abdomen showing air fluid levels in the intestine



Figure 2: Intraoperative finding of splenic infarction



Figure 3: Intraoperative picture showing adhesions in the splenic flexure

DISCUSSION

Splenic infarction refers to occlusion of the splenic vascular supply, leading to parenchymal ischaemia and subsequent tissue necrosis. The infarct maybe segmental or it may be global involving the entire organ. Splenic infarction alone is not an indication for surgery. However, now operative management requires close follow up and surgery is indicated for persistent symptoms or in presence of complications such as haemorrhage, rupture, abscess or intestinal obstruction.²

There are very rare causes of intestinal obstruction caused by splenic infarction and was reported previously in which small bowel and colon was adherent to the spleen.³

However, our case was different because the splenic infarction here caused the complete necrosis of spleen which in turn led to adhesions of splenic flexure and descending colon to the necrosed spleen and thus causing obstruction.

Interestingly, S.I.R.S. was in patient where body temperature was 38.5 degree centigrade (>38 degree centigrade), heart rate was 96/min(>90/min), respiratory rate 28/min(>20.imn) and T.L.C. was 25,900 cells/cm³(>12,000 cells/cm³)

These clinical parameters fulfilled four S.I.R.S. criteria's recommended by American College of Chest Physicain's of Critical Care Medicine Consensus Conference. However, presentation of S.I.R.S. is likely to be related to intestinal obstruction with resultant bacterial

References:

Pre -operative diagnosis of splenic infarct can be made with abdominal CT scan and USG.⁵

CT scan may detect the stage, size and changes of surrounding tissue. Abdominal; CT may reveal a hypodense mass with enhancement. M.R.I. scintigraphy and angiography can provide significant information but they are not always available in emergency conditions. In our case emergency laparotomy was performed to avert further intestinal obstruction and avoid progress to M.O.D.S. there was not enough time to do CT scan, M.R.I., scintigraphy or angiography.

In conclusion, splenic infarct and its complication such as intestinal obstruction are rare. It is very difficult to make diagnosis preoperatively. This entity should be considered in differential diagnosis of acute abdomen. In case of acute abdomen. In case of acute abdomen with critical clinical situation emergency surgical intervention is necessary for timely diagnosis and treatment.