10.5005/jp-journals-10033-1269

CASE REPORT

Proximal Small Intestinal Obstruction: A Rare Presentation of Splenosis

[1]Vijaykumar C Bada, [2]Rajvilas Anil Narkhede

ABSTRACT

Splenosis is a benign condition caused by heterotrophic autotransplantation of splenic pulp following splenic trauma or surgery. Splenosis is rare and intestinal obstruction due to splenosis is even rarer. Most of the patients with splenosis are asymptomatic. There are few reports of large bowel obstruction due to splenosis, but reports of small bowel obstruction due to splenosis are scanty. We report a case of proximal small bowel obstruction due to postsplenectomy splenosis treated by laparoscopic surgery. Index of suspicion with radiological evaluation is the key to preoperative diagnosis of splenosis. Laparoscopic surgery is an effective means of treating such patients with good long-term outcome.

Keywords: Intestinal obstruction, Postsplenectomy complications, Splenosis.

How to cite this article: Bada VC, Narkhede RA. Proximal Small Intestinal Obstruction: A Rare Presentation of Splenosis. World J Lap Surg 2016;9(1):41-43.

Source of support: Nil

Conflict of interest: None

CASE REPORT

We present the case of a 55-year-old male who presented with acute colicky, nonradiating pain in the umbilical region, gradually increasing in intensity since 15 days and associated with multiple episodes of nonprojectile, nonbilious vomiting, 3 to 4 times a day, which used to relieve the pain. He had constipation since 3 days associated with gradually increasing abdominal distension. He had similar episodes of abdominal pain and multiple bilious vomiting since last 5 years, which were treated conservatively. He had a history of blunt abdominal trauma 40 years back for which laparotomy was performed for hemoperitoneum, details of which were not available. History of loss of weight is also present. On examination, he had tachycardia. Abdomen was distended with tenderness localized to the periumbilical region. Bowel sounds were sluggish. There was no evidence of any free fluid or palpable mass in the abdomen.

Contrast-enhanced computed tomography of the abdomen showed dilated proximal bowel loops with dilated duodenum and stomach (Fig. 1). Multiple hyperdense lesions were noted in the peritoneal cavity, compressing proximal jejunum with dilated proximal jejunum, duodenum, and stomach with collapsed distal bowel.

Diagnostic laparoscopy showed omento-parietal adhesions, proximal dilated bowel loops, narrowing in the proximal part of jejunum with multiple splenunculi at the area of transition (Fig. 2). Distal small bowel was collapsed. Adhesiolysis, resection of the strictured jejunal part with the compressing splenunculi, and end-to-end anastomosis were done. Postoperative recovery was uneventful. He was discharged on postoperative day 5. On follow-up up to 1 year, he was comfortable with no recurrence in pain or vomiting.

DISCUSSION

We reported the case of an uncommon presentation of splenosis. Very few cases of small bowel obstruction secondary to splenosis are reported, but proximal small bowel obstruction is still rare. Rectosigmoid and small bowel obstruction due to splenunculi has been reported by Gincu et al[1] and Sirinek et al.[1,2] High index of suspicion

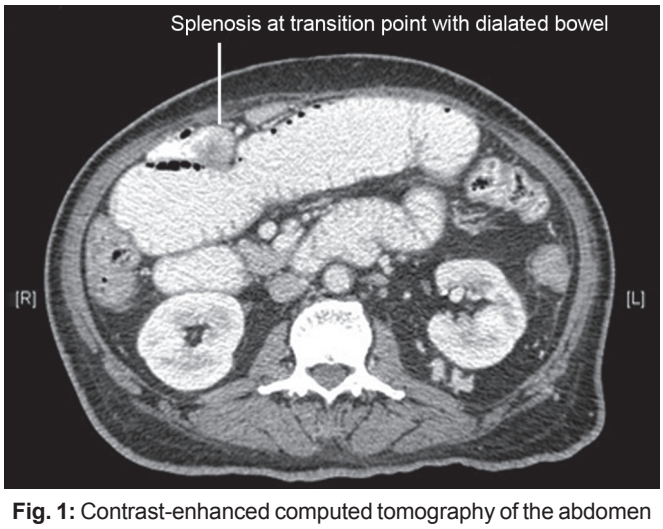

Fig. 1: Contrast-enhanced computed tomography of the abdomen suggesting splenosis with transition point of intestinal obstruction

[1]Consultant, [2]Fellow

[1,2]Department of Surgical Gastroenterology, Global Hospitals Hyderabad, Telangana, India

Corresponding Author: Rajvilas Anil Narkhede, Fellow Department of Surgical Gastroenterology, Global Hospitals Hyderabad, Telangana, India, Phone: +918897389898, e-mail: rajvilas.narkhede@gmail.com

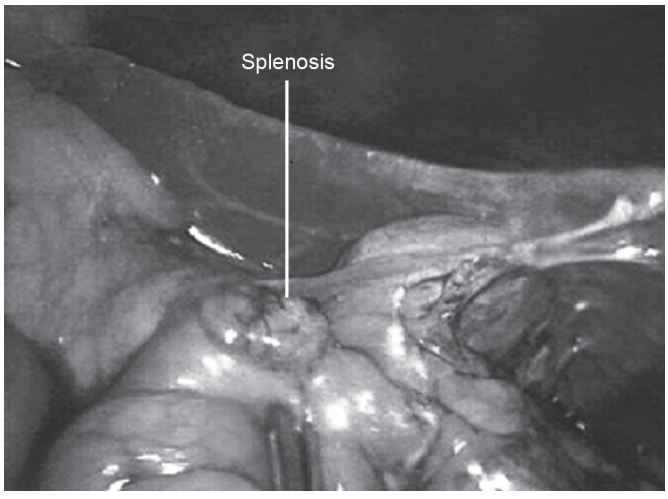

Fig. 2: Splenosis obstruction of small intestine

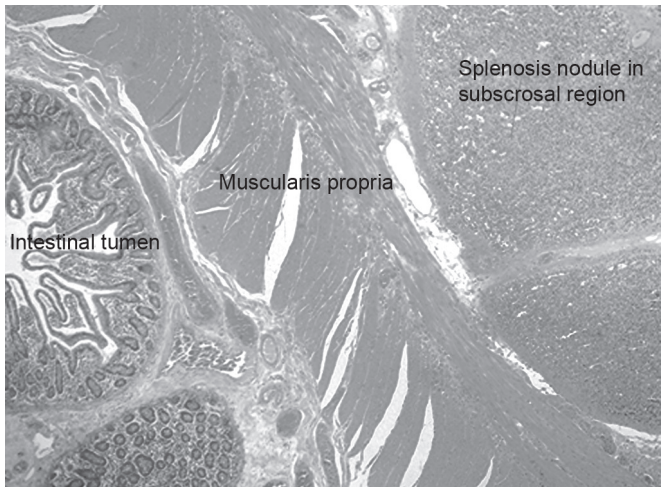

Fig. 3: Histopathology showing subscrosal splenosis

required in such patients with splenic trauma presenting with subacute intestinal obstruction needs further evaluation for definitive diagnosis.

Splenosis, a term first used by Buchbinder and Lipkopf in 1939,[3] and first presented by Von Kuttner in 1910[4] during autopsy, is heterotrophic autotransplantation of splenic pulp after splenic trauma, iatrogenic injury, or splenectomy.[5] The exact incidence of splenosis is unknown, but reported incidence after elective splenectomy for hematological disorders is 16 to 17%, for traumatic splenectomy it is approximately 33 to 76% for intraperitoneal splenosis, whereas it is 18% for thoracic splenosis. The known mechanism for intraperitoneal and intrathoracic splenosis with diaphragmatic injury is direct implantation of viable splenic tissue. Intrahepatic and intracranial implantation can be explained by hematogenous spread of splenic pulp.[5] One theory also suggests that splenic erythrocytic progenitor cells enter the liver via the portal vein and then grow in response to tissue hypoxia.[6] The average interval reported between trauma and abdominal or pelvic splenosis was 10 years, with a range of 5 months to 42 years.

The commonly reported sites for splenosis in the literature are abdominal cavity, thorax including pericardium, subcutaneous tissue, pelvis, intrahepatic portion, renal, mesoappendix, pancreas, or even intracranially. Splenosis is usually asymptomatic and diagnosed incidentally on computed tomography (CT) scan, magnetic resonance imaging (MRI), or during surgical procedure. Occasionally, patients present with nonspecific abdominal pain, an enlarging abdominal mass with associated infection, intestinal obstruction due to adhesive bands of the implants, gastrointestinal hemorrhage, hydronephrosis or pelvic pain, dysmenorrhea, dyspareunia secondary to pelvic deposits, or rarely as a recurrence of previously treated hematological disease.[7] But preoperative diagnosis of splenosis may be made using radiological and nuclear imaging studies, such as scintigraphy with (99m) Tc-labeled heat-denatured erythrocytes, while adding single-photon emission computed tomography/CT can help in correct localization.[8] Ferumoxide-enhanced magnetic resonance has also been used for diagnosis. Splenosis tissue on histology often shows abnormal architecture with no hilum and poorly formed capsule with lack of trabecular structure[5] (Fig. 3). Sometimes histology and immunohistochemistry are indistinguishable from the normal spleen. But signs of thrombosis, infarction, and scarring lead to the atypical imaging findings on CT and MRI.

It can mimic tumors in variable viscera. Recurrence of Felty's syndrome or idiopathic thrombocytopenic purpura[9] also has been reported as a complication of splenosis, because usually splenic implants resume splenic function in 1 to 3 months. When preoperative diagnosis is done, minimally invasive surgery, such as laparoscopy is the ideal treatment for patients with symptomatic splenosis.

In this case, since the diagnosis was preoperative, laparoscopic adhesiolysis and excision of splenic deposits were done to relieve the obstruction. But it should be borne in mind that splenosis nodules need to be removed completely and spillage should be prevented by using an end bag. Laparoscopic approach was reported to be a successful diagnostic and interventional tool.

REFERENCES

1. Tsitouridis I, Michaelides M, Sotiriadis C, Arvaniti M. CT and MRI of intraperitoneal splenosis. 2010;145-149.
2. Liu Y, Ji B, Wang G, Wang Y. Abdominal multiple splenosis mimicking liver and colon tumors: a case report and Review of the Literature; 2012.
3. Gincu V, Kornprat P, Thimary F, Jahn S, Mischinger HJ. Intestinal obstruction caused by splenosis at the rectosigmoid junction, mimicking malignant pelvic tumor. Endoscopy 2011;43 (Suppl 2) UCTN:E260.

4. Sirinek KR, Livingston CD, Bova JG, Levine BA. Bowel obstruction due to infarcted splenosis. South Med J [Internet] 1984 Jun;77(6):764-767. Available from: http://www.ncbi.nlm.nih.gov/pubmed/6729556
5. Fremont RD, Rice TW. Splenosis versus accessory spleens. South Med J 2007;100(6):589-593.
6. Kwok C-M, Chen Y-T, Lin H-T, Su C-H, Liu Y-S, Chiu Y-C. Portal vein entrance of splenic erythrocytic progenitor cells and local hypoxia of liver, two events cause intrahepatic splenosis. Med Hypotheses [Internet] 2006 Jan;67(6):1330-1332. Available from: http://www.ncbi.nlm.nih.gov/pubmed/16860491
7. Mazur EM, Field WW, Cahow CE, Schiffman FJ, Duffy TP, Forget BG. Idiopathic thrombocytopenic purpura occurring in a subject previously splenectomized for traumatic splenic rupture. Role of splenosis in the pathogenesis of thrombocytopenia. Am J Med [Internet] 1978 Nov;65(5):843-846. Available from: http://www.ncbi.nlm.nih.gov/pubmed/568386
8. Gunes I, Yilmazlar T, Sarikaya I, Akbunar T, Irgil C. Scintigraphic detection of splenosis: superiority of tomographic selective spleen scintigraphy. Clin Radiol [Internet] 1994 Feb;49(2):115-117. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8124888
9. Barbaros U, DinççağA, Kabul E. Minimally invasive surgery in the treatment of splenosis. Surg Laparosc Endosc Percutan Tech [Internet] 2006 Jun;16(3):187-189. Available from: http://www.ncbi.nlm.nih.gov/pubmed/16804467