

Splenic Rupture after Colonoscopy

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INTRODUCTION

Colonoscopy is a widely used procedure for the diagnosis and treatment of colorectal disorders, but the procedure still has risks including colonic perforation and bleeding. Splenic rupture is a rare post colonoscopy complication, with only 103 cases published until the end of 2012 [1]. These patients are mainly female (71.5%) and have a mean age of 63 years [2]. Of these cases, predisposing factors for splenic injury, such as splenocolic adhesions, splenomegaly, or underlying splenic disease have been identified as risk factors. Traction on these preexisting adhesions, or on the splenocolic ligament itself, can occur during descending colon manipulation or during attempts to pass through the splenic flexure [3]. This then can result in tears in the ligaments and adhesions, and ultimately splenic rupture. This a life threatening complication that must be included in the differential diagnosis of any patient presenting with abdominal pain after colonoscopy, especially in those with history of previous abdominal surgery.

CASE REPORT

This is a case of a 52 year old woman with a past surgical history of trauma exploratory laparotomy 20 years ago who presented to the ED with a complaint of severe abdominal pain after a colonoscopy 8 hours prior. A chest XRAY was performed with no free air. Subsequently a CTAP was performed, significant for a large 15x10x14 cm subscapular splenic hematoma with evidence of active contrast extravasation and posterior focal defects concerning for grade 4 or 5 splenic rupture. The patient was taken emergently to the operating room for an exploratory laparotomy. Immediately upon entry into the abdomen hemoperitoneum was encountered with significant adhesions in the left upper quadrant encasing the left lobe of the liver and stomach. All four quadrants were packed in the usual trauma laparotomy fashion. The packs were removed from the right upper, right lower, and left lower quadrants, with no bleeding or viscus injury found. Adhesions were dissected from the liver first, which was found to have venous oozing from the capsule. After extensive adhesiolysis the spleen was identified and found to have a grade 4 rupture with active bleeding. A splenectomy was performed, with no further active bleeding identified. Laparotomy pads were packed in the left upper quadrant and over the liver capsule injury to secure hemostasis. An abthera vac was placed and the patient taken to the surgical intensive care unit in critical condition. The patient was taken back the next day, with closure of the abdomen and was discharged home on postoperative day 6.

FIGURE 1. CTAP showing a large subscapular splenic hematoma with evidence of active extravasation



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CONCLUSIONS

Splenic rupture is a lethal injury and with increased utilization of colonoscopies, is a complication that both endoscopists and surgeons should be aware of. A thorough medical and surgical history with physical examination should be performed prior to endoscopic procedures. A history of previous abdominal surgery or trauma constitutes a high-risk factor for splenic injury, given that splenocolic adhesions may exist in these patients [3]. Excessive care should be taken with the passage and removal of the scope through the splenic flexure, where splenocolic adhesions may exist and subsequently cause splenic injury. The most common signs and symptoms are abdominal pain without radiographic evidence of perforation, as in this case. CT is considered the diagnostic modality of choice in the stable patient, and is highly accurate in detecting the grade of splenic injury and hemoperitoneum [4]. The faster clinicians place splenic rupture on the list of differential diagnoses, the sooner the appropriate imaging and workup, like CTAP, can be performed and the earlier can the patient receive the appropriate treatment for this potentially fatal complication.

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