An Unusual Case of Recurrent Post-Surgical Small Bowel Obstruction, Leading to Decompressive Double-Barrel Ileostomy for a Possible Adult Hirschprung's Disease

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Introduction

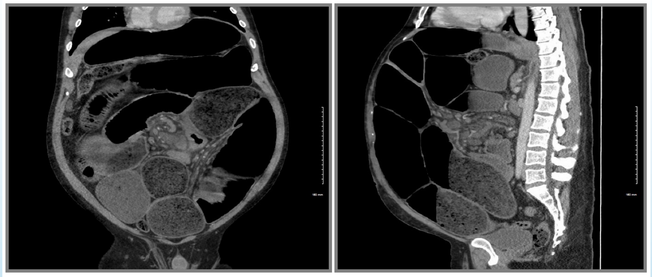
Acute Small Bowel Obstruction (SBO) is considered a surgical emergency that accounts for 20% of emergency surgical procedures that follow complaints of abdominal pain and places a significant financial burden on the healthcare system[1]. Mechanical obstruction can occur either intrinsically if something obstructs the lumen, or extrinsically due to compression by nearby structures. If the bowel twists and loops around itself, it may also lead to a closed-loop obstruction, where both ends of the lumen are compressed and block the passage of material. The contents trapped inside the obstructed lumen then begin to ferment, producing gases that dilate the lumen and subsequently worsen the compression at the point of obstruction. This may ultimately lead to compression of the intramural vessels in the wall of the small intestine, increasing the risk of ischemia to the obstructed segment[3].

In this case the patient presents with a classic case of SBO secondary to volvulus and was emergently managed with surgery. His history was notable for other episodes of SBO and he had a second episode of unexplained SBO even after he was initially treated. This led the surgical team to plan and follow through with a double-barrel small bowel ileostomy to decompress the bowel and prevent similar episodes in the future until a definitive diagnosis for his condition is obtained.

The work presented in this case report has been reported in line with the SCARE criteria[4].

Case Report

The patient is a 41-year-old male with chronic constipation, prior history of an unknown volvulus that was resected in 2014, and a ventral hernia repair with mesh in 2017 that was complicated by post-operative SBO. He presented to the Emergency Department (ED) with acute, diffuse, and severe abdominal pain. He was found to have dilated small bowel loops with air-fluid levels and swirling mesenteric vessels, indicating likely SBO secondary to a volvulus. Decompression was achieved in the OR through a small enterotomy incision in an ischemic, 5cm loop of small bowel. 3000cc's of feculent material were evacuated, bowel decompressed, volvulus released, and the abdomen closed with staples. On Post-Op Day (POD) 7, despite appearing to recover well, small bowel was noted to have eviscerated through the inferior aspect of his abdominal incision. He was taken back to the OR for repair and again, the small bowel was noted to be dilated. A double-barrel ileostomy was then performed to mitigate the risk of yet another SBO, until a definitive diagnosis is achieved for this patient.





Discussion

After the second surgery, the patient continued to recover appropriately but on POD two he was transferred to a larger facility for continued care. Due to this series of events and his repeated episodes of obstruction, we believed he would benefit from a higher level of care. He continued to do well at their facility and was eventually discharged on POD 13.

This was a unique case due to the multiple unexplained recurrences of small bowel obstruction after surgical procedures. This was seen on presentation, after the index case, and in 2017 with his prior surgery. Multiple abdominal surgeries are indeed risk factors for SBO due to the formation of adhesions[5] but, in both of these cases, adhesions were not determined to be the cause of obstruction. One possible explanation for this patient is that he may be suffering from a very rare condition of Adult Hirschprung's disease, which has only been reported a few times in the literature[2,6,7]. This condition is frequently overlooked in adults due to its rarity and is frequently masked when the symptoms of chronic constipation are managed by enemas or drugs such as pyridostigmine in this patient's case[2]. This condition has been successfully treated with a modified Duhamel-Martin procedure in adults, similar to children with Hirschprung's disease[7].

Another reason for transferring this patient from the community hospital setting to a larger academic facility was to help reach a definitive diagnosis such as this, to prevent recurrence of SBO should he need another abdominal surgery procedure in the future. This case report serves to shed light on a rare condition that may explain multiple cases of SBO in patients with chronic constipation. Awareness may lead to more prompt treatment with definitive surgery and prevent the burden of recurrent surgery on both the patient and the healthcare system as a whole.

Acknowledgment

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