Right Colon Pneumatosis: A Rare Complication After Laparoscopic Gastric Bypass

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Introduction

Laparoscopic conversion of sleeve gastrectomy to Roux-en-Y gastric bypass is commonly performed for refractory gastroesophageal reflux disease or weight-related complications. Although internal hernias and small bowel obstruction are recognized postoperative complications, colonic obstruction related to omental anatomy is extremely rare.

Closure of Petersen's defect is routinely performed to prevent internal herniation; however, altered omental positioning during Roux limb creation may create unexpected points of obstruction.

We present a rare case of transverse colon obstruction caused by a split omentum herniating above Petersen's closure, resulting in right colon dilation and pneumatosis.

Case Presentation

A 44-year-old male with a history of obesity, chronic pain, and GERD previously underwent laparoscopic sleeve gastrectomy. Due to persistent reflux symptoms, further evaluation revealed a hiatal hernia and esophagitis. The patient subsequently underwent laparoscopic conversion of sleeve gastrectomy to Roux-en-Y gastric bypass with hiatal hernia repair.

Intraoperatively, the omentum was noted to be bulky and was split to allow passage of the Roux limb, and Petersen's defect was closed using running Ethibond suture.

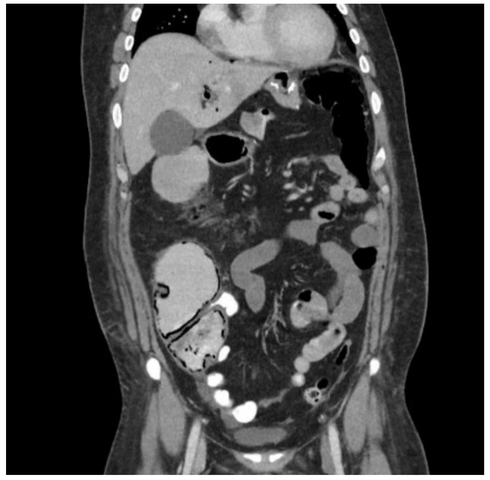
On postoperative day two, the patient developed worsening right lower quadrant abdominal pain with localized peritonitis. CT abdomen and pelvis with PO and IV contrast demonstrated dilation of the transverse and right colon with pneumatosis of the right colon and cecum, as well as portal venous gas, concerning for bowel compromise.

The patient was taken emergently to the operating room for robotic-assisted diagnostic laparoscopy. Intraoperatively, the cecum was viable but had a 10 cm serosal tear along the taenia coli, which was repaired with running Vicryl suture. A leaflet of the left omentum was found herniating above Petersen's closure posterior to the Roux limb, resulting in mechanical obstruction of the colon. The herniated omentum was reduced and partial omentectomy was performed.

Results / Discussion / Conclusion

Colonic obstruction with pneumatosis is a rare but potentially serious complication following bariatric surgery. In this case, herniation of a split omental leaflet above Petersen's closure created a mechanical obstruction that resulted in colonic dilation and cecal serosal injury.

This case highlights the importance of early recognition of atypical postoperative abdominal pain after bariatric surgery and prompt surgical exploration when imaging suggests bowel compromise. Timely operative intervention can prevent progression to ischemia and improve patient outcomes.



CT demonstrating right colonic pneumatosis