



## Case Report: Recurrent Giant Symptomatic Colonic Cyst

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### Abstract

Defunctionalized colon is not listed in literature as a complication of colorectal surgery. Moreover, to our knowledge there is no literature describing defunctionalized colon from a prior colectomy for Colo Rectal Cancer (CRC) masquerading as an intra-abdominal cyst as a potential complication of colorectal surgery. We describe the diagnosis and management of a 46-year-old patient with a recurrent symptomatic colonic cyst in this report.

### Introduction

Common complications of colorectal surgery such as bowel or vascular injuries are well described in current literature, but recurrent symptomatic colonic cysts from defunctionalized colon are not. Defunctionalized colon has not been shown to undergo structural or functional changes with colostomy and in this report, we describe a case of closed loop defunctionalized colon causing recurring symptoms in a patient [1].

### Case Presentation

A 46-year-old male presented to the hospital with dull abdominal pain and nausea presumed to be caused by a recurrent giant left paracolic gutter cyst measuring 14 cm x 7 cm x 7.5 cm that had been previously percutaneously drained twice approximately a month apart (Figures 1,2). Drainage at both instances showed evidence of mucinous fluid with no signs of infection. A colonoscopy was performed after the second percutaneous drainage and it showed two benign polyps and no communication with the cystic lesion. Four years prior, the patient underwent a left colectomy and Hartmann's procedure for obstructing left colon cancer. He was diagnosed with stage III left colon cancer and underwent adjuvant chemotherapy followed by Hartmann's reversal. He recovered well from the surgical procedure until his symptoms of early satiety, abdominal distension and recurrent abdominal pain appeared.

An exploratory laparotomy was performed due to persistent pain and showed excess pools of mucinous fluid in the abdomen. At the time of exploration, the cyst was decompressed and adherent to the colon. The wall of the cyst was not excised at that time and intraoperative pathology consult and biopsy were performed. The results were equivocal for recurrent neoplastic disease. Cytology of mucinous fluid was negative for cancerous cells. Drains were placed and subsequently removed due to minimal output. The patient was discharged without any complications and scheduled for clinic follow up.

Three months later the patient presented again to the hospital for left lower quadrant abdominal pain and nausea. CT scan showed once again an intra-abdominal mass that had increased to 21 cm x 10 cm x 13 cm. Patient was sent for IR drainage and was once again discharged with a drain in place with resolution of symptoms and scheduled for follow up in clinic.

A repeat CT scan of the abdomen for the persistent cyst another three months later was suggestive of retained defunctionalized colon at the splenic flexure. Due to persistent abdominal pain and splenomegaly with concomitant thrombocytopenia, an exploratory laparotomy was performed. The splenic flexure was noted to be adhered to the hilum of the spleen and isolated from the distal and transverse colon. This portion of the defunctionalized splenic flexure was resected en-bloc with the spleen. The patient was discharged with no complications.

Biopsy of resected tissue was negative for malignancy and pathology was consistent with colonic tissue with blind loop ends. One year later at follow up, patient reported resolution of all symptoms. Patient was recommended to follow up in a year due to past history of colon cancer.

### Discussion

The patient in this case report had a history of colorectal cancer, hence the most crucial step

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Figure 1: Sagittal CT on first presentation.

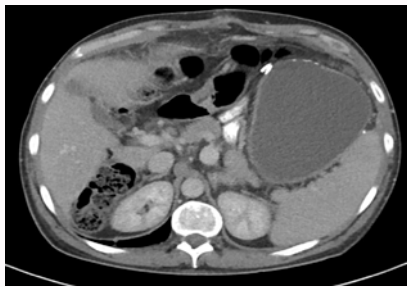


Figure 2: Axial CT on first presentation.

in elucidating the diagnosis was to rule out recurrence of colon cancer. Recurrence of the primary lesion, a synchronous colon lesion or an entirely new gastrointestinal neoplastic disease were important differentials to consider. Although colorectal cancer typically does not present as a cystic mass, some colorectal tumors are mucin producing. It is believed that extracellular mucin allows for regional extension of the tumor [2]. It is reasonable to have recurrent cancer as a top differential given a previous history of Colo Rectal Cancer (CRC) as in our patient. However, in this case the drainage samples obtained were negative for malignancy. Other differentials including mesenteric cyst or defunctionalized colonic cyst could not be confirmed without surgical exploration and a definitive pathology report.

Mesenteric cystic masses are usually characterized by their histopathology and their location [3]. The groups can be divided into cysts of lymphatic, mesothelial, enteric or urogenital origin [4]. In addition, cysts can be characterized as mature cystic teratomas and pseudocysts resulting from infection and trauma.

Previous biopsies of the cyst wall had reported non-diagnostic loose fibro vascular connective and adipose tissue with abundant admixed and associated mucinous material. Histiocytes, mesothelial cells, and epithelial cells were noted as well. However, due to the location of the cyst, the surgical history of the patient and the final CT scan, the diagnosis of retained defunctionalized colon was made.

Defunctionalized colon is not listed in literature as a complication of colorectal surgery. Complications of colorectal surgery can be divided into intraoperative and postoperative groups. Intraoperative complications can include bleeding, bowel, vascular, ureteral and bladder injuries. The most commonly reported postoperative complications of colorectal surgical procedures include surgical site infections, anastomotic leakage, intra-abdominal abscess, ileus, and bleeding [5,6]. Possible risk factors for complications are age, comorbid conditions, nutrition status of patient, and experience of the surgeon [7-10].

Human defunctionalized colon has not been shown to undergo functional or structural changes after colostomy [1]. In addition, defunctionalized colons are expected to secrete normal mucinous material. A closed loop of defunctionalized colon could form a cyst of mucinous fluid as occurred in our patient. To our knowledge there is no literature describing defunctionalized colon from a prior colectomy for CRC masquerading as an intra-abdominal cyst as a potential complication of colorectal surgery.

## References

1. Violi V, Cobianchi F, Adami M, Torri T, Ferraro G, Roncoroni L. Human defunctionalized colon: a Histopathological and pharmacological study of muscularis propria in resection specimens. *Dig Dis Sci.* 1998;43(3):616-23.
2. Green JB, Timmcke AE, Mitchell WT, Hicks TC, Gathright JB Jr, Ray JF. Mucinous Carcinoma - Just another Colon Cancer? *Dis Colon Rectum.* 1993;36(1):49-54.
3. Rajendran S, Khan A, Murphy M, O'Hanlon D. The Diagnosis and Treatment of a Symptomatic Mesenteric Cyst. *BMJ Case Rep.* 2014;2014.
4. De Perrot M, Brundler M, Totsch M, Mentha G, Morel P. Mesenteric cysts. Toward less confusion? *Dig Surg.* 2000;17(4):323-8.
5. Kirchhoff P, Clavien PA, Hahnloser D. Complications in Colorectal Surgery: Risk Factors and Preventive Strategies. *Patient Saf Surg.* 2010;4(1):5.
6. Artinyan A, Nunoo-Mensah JW, Balasubramaniam S, Gauderman J, Essani R, Gonzalez-Ruiz C, et al. Prolonged postoperative ileus-definition, risk factors, and predictors after surgery. *World J Surg.* 2008;32(7):1495-500.
7. Kirchhoff P, Dincler S, Buchmann P. A multivariate analysis of potential risk factors for intra- and postoperative complications in 1316 elective laparoscopic colorectal procedures. *Ann Surg.* 2008;248(2):259-65.
8. McGillicuddy EA, Schuster KM, Davis KA, Longo WE. Factors predicting morbidity and mortality in emergency colorectal procedures in elderly patients. *Arch Surg.* 2009;144(12):1157-62.
9. Yoo PS, Mulkeen AL, Frattini JC, Longo WE, Cha CH. Assessing risk factors for adverse outcomes in emergent colorectal surgery. *Surg Oncol.* 2006;15(2):85-9.
10. Margenthaler JA, Longo WE, Virgo KS, Johnson FE, Grossmann EM, Schiffner TL, et al. Risk factors for adverse outcomes following surgery for small bowel obstruction. *Ann Surg.* 2006;243(4):456-64.