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7 **Unusual Presentation of Crohn's Disease**

8 *Distal transverse colon mass*

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18 **Abstract**

19 Crohn's disease is an inflammatory chronic disease affecting the gastrointestinal tract, mostly the
20 colon and terminal ileum. The most frequent presentation is a young patient presented to a
21 tertiary care center in Riyadh, Saudi Arabia in 2021 with chronic diarrhea, rectal bleeding, and
22 abdominal pain. It is unusual for patients with Crohn's disease to develop a benign large colon
23 mass. In this case report, a female patient presented with chronic abdominal pain. The computed
24 tomography findings showed a transverse colon mass invading the stomach. The biopsy report
25 indicated reactive colonic mucosa with focal inflammatory exudate. She underwent a
26 laparoscopic extended left hemicolectomy with en-bloc resection of the greater curvature of the
27 stomach and primary anastomosis.

28 **Keywords:** IBD, Crohn's disease, colon mass, transverse colon, abdominal pain.

29

30 **Introduction**

31 Crohn's disease is an inflammatory chronic disease which affects the gastrointestinal tract from
32 the mouth to the anus, but it usually affects the colon and terminal ileum.¹ The onset usually
33 occurs in the second to the fourth decade of life.² The prevalence and incidence are higher in
34 developed countries and urban areas.³ There is a high risk for patients with Crohn's disease to
35 develop cancer, thrombotic events, infections, and osteoporosis.^{4,5} However, it is unusual for to
36 develop a benign large colon mass as the first manifestation of this disease. In this article, we
37 report a unique case of a 42-year-old female patient with a distal transverse colon mass
38 manifesting as abdominal pain, without a prior diagnosis of inflammatory bowel disease (IBD).

39

40 **Case Report**

41 A 42-year-old female presented at the Emergency Room (ER) with localized abdominal pain for
42 2 months. The pain was colicky in nature, sporadic, and responding to analgesia in the initial
43 episodes. She had no change in bowel habits including constipation, diarrhea or melena, and was
44 passing stool and flatus as usual. The patient reported that she lost 10 kg over the last months.
45 She had no chronic diseases or symptoms suggestive of IBD and no family history of Crohn's
46 disease. However, her father died of colon cancer at the age of 80 years.

47

48 Her physical examination was unremarkable. Her laboratory investigations were within normal
49 limits. For example, White Blood Cell $7.28 \times 10^9/L$; Hemoglobin 11 gm/L; CA 19-9 14 kU/L
50 (U/mL) (Normal Range $<39 \text{ U/ml}$); CEA $<1.7 \text{ mg/mL}$ (Normal Range $<3.4 \text{ mg/ml}$); CA125
51 19 kU/L (U/mL) (Normal Range $<35 \text{ kU/L}$); CA15-3 16.8 kU/L (U/mL) (Normal Range <25
52 Uml); CRP 8 mg/L .

53

54 An abdominal CT scan revealed a distal transverse colon soft tissue mass extending along the
55 gastro colic ligament, invading the great curvature of the stomach with no bowel obstruction or
56 perforation. In addition, there were multiple local regional lymphadenopathy and peritoneal
57 nodules (Figure 1). After reviewing the abdominal CT, and because the mass originated from the
58 descending colon, we elected to proceed with a colonoscopy only to obtain a biopsy of the mass.
59 During the colonoscopy, circumferential wall thickening, and an obstructing left colonic mass,
60 65 cm away from the anal verge was observed (Figure 2). Several biopsies were taken, which

61 indicated colonic mucosa with crypt distortion, negative for granuloma, viral cytopathic effects,
62 dysplasia, and malignancy.

63
64 The case was discussed during the Tumor Board and the committee advised a magnetic
65 resonance imaging (MRI) of the abdomen. They also recommended repeating the colonoscopy to
66 obtain sufficient biopsies with an upper gastrointestinal endoscopy to evaluate the stomach. The
67 esophagogastroduodenoscopy showed a thickened fold at the gastric body with a small hiatal
68 hernia, no visible masses were reported (Figure 2). The gastric biopsy showed moderately active
69 chronic gastritis with regenerative changes, multiple helicobacter shaped bacilli, and was
70 negative for intestinal metaplasia, dysplasia, and malignancy. The repeated colonoscopy
71 indicated the same findings of the first colonoscopy and the repeated biopsy indicated reactive
72 colonic mucosa with focal inflammatory exudate and negative for dysplasia and malignancy. The
73 MRI showed a locally infiltrative distal transverse colon mass with lymphovascular invasion to
74 the stomach and the presence of peritoneal nodules.

75
76 After completing the workup, the patient was discussed again at the Tumor Board and the
77 committee updated with the recent results. The decision was to proceed with surgical resection,
78 rather than doing additional investigations such as a lymph node biopsy, given the patient's
79 symptoms and the high suspicion of malignancy.

80
81 The patient underwent a laparoscopic en-bloc extended left hemicolectomy and wedge resection
82 of the greater curvature of the stomach with a colo-colic anastomosis. With the gross
83 examination, a mass in the distal transverse colon was adherent and attached to great curvature of
84 the stomach and no liver lesion or peritoneal deposits were seen (Figure 3). The area of concern
85 was thickened, and irregular compared to the rest of the bowel texture. The final pathology
86 report of the specimen indicated a colonic mucosa with extensive ulceration and mass-like
87 formation consistent with an exudative adhesive process, with scattered foci of non-caseating
88 early granulomatous inflammation, suggesting an active inflammatory bowel disease and
89 favoring Crohn's disease over ulcerative colitis (UC) (Figure 4). A second pathologist examined
90 the specimen and concurred the result. The patient had an uncomplicated postoperative course.
91 She was discharged on Day 4 postoperatively, and followed-up at the clinic, referred to

92 Gastrointestinal Service for long term management and scheduled for a follow-up upper and
93 lower endoscopy.

94

95 The plan is to do laboratory tests including stool calprotectin in 3 months and to repeat the upper
96 and lower endoscopy one year after the last procedure or earlier if indicated clinically
97 (symptomatic or high calprotectin).

98

99 Informed consent was obtained from the patient for the publication of this case report and
100 accompanying images.

101

102 **Discussion**

103 The most frequent presentation of Crohn's disease is a young patient with chronic diarrhea,
104 anorexia, fatigue, rectal bleeding, abdominal pain, perianal lesion, and weight loss.⁶ More than
105 50% of patients will present with extraintestinal manifestation such as eyes, joints, and skin,
106 which could appear before the gastrointestinal manifestation.⁶ Half of the patients with Crohn's
107 disease could develop complications which may require surgery, such as a fistula, abscess, and
108 strictures.⁷ Several unusual presentations of Crohn's disease have been reported in literature,
109 including scrotal and penile swelling^{8,9} as well as a pyogenic abscess.^{10,11} These unusual
110 presentations often delay the diagnosis and appropriate management for the patients.

111

112 **Conclusion**

113 The current case is unusual in that the patient was presented with a solid transverse colon mass,
114 which was invading the stomach without any clinical signs or family history of inflammatory
115 bowel disease. Although the diagnosis could not be established preoperatively, surgical resection
116 was deemed the most appropriate approach given the high suspicion of malignancy and the
117 patient's symptoms. This case highlights the importance of a multidisciplinary approach in such
118 cases and the need to consider other differential diagnosis, such as inflammatory bowel disease,
119 especially if a firm diagnosis could not be established with a thorough work up.

120

121 **Authors' Contribution**

122 This case report was supervised and reviewed by NA, while the introduction and case report
123 were conducted by AA. The discussion part was written and discussed by SbG and SM with the
124 revision done by NA. The conclusion part and figures were written and collected by SB. All
125 authors approved the final version of the manuscript.

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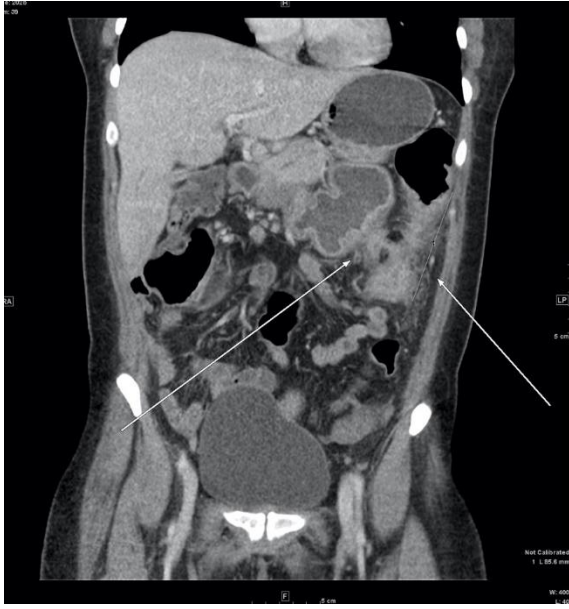
127 **References**

- 128 1. Peyrin-Biroulet L, Loftus E, Colombel J, Sandborn W. The Natural History of Adult
129 Crohn's Disease in Population-Based Cohorts. *American Journal of Gastroenterology*.
130 2010;105(2):289-297. doi:10.1038/ajg.2009.579
- 131 2. Ananthakrishnan A. Epidemiology and risk factors for IBD. *Nature Reviews*
132 *Gastroenterology & Hepatology*. 2015;12(4):205-217. doi:10.1038/nrgastro.2015.34
- 133 3. Molodecky N, Soon I, Rabi D et al. Increasing Incidence and Prevalence of the
134 Inflammatory Bowel Diseases With Time, Based on Systematic Review. *Gastroenterology*.
135 2012;142(1):46-54.e42. doi:10.1053/j.gastro.2011.10.001
- 136 4. Abegunde A, Muhammad B, Ali T. Preventive health measures in inflammatory bowel
137 disease. *World J Gastroenterol*. 2016;22(34):7625. doi:10.3748/wjg.v22.i34.7625
- 138 5. Beaugerie L, Itzkowitz S. Cancers Complicating Inflammatory Bowel Disease. *New*
139 *England Journal of Medicine*. 2015;372(15):1441-1452. doi:10.1056/nejmra1403718
- 140 6. Torres J, Mehandru S, Colombel J, Peyrin-Biroulet L. Crohn's disease. *The Lancet*.
141 2017;389(10080):1741-1755. doi:10.1016/s0140-6736(16)31711-1
- 142 7. Pariente B, Mary J, Colombel J, Cosnes J. 6 Development of the Crohn's disease (CD)
143 digestive damage score: the Lémann score. *Journal of Crohn's and Colitis*. 2013;7:S3.
144 doi:10.1016/s1873-9946(13)60007-0
- 145 8. Simoneaux S, Ball T, Atkinson G. Scrotal swelling: Unusual first presentation of Crohn's
146 disease. *Pediatr Radiol*. 1995;25(5):375-376. doi:10.1007/bf02021708
- 147 9. Reitsma WR, Wiegman MJ, Damstra RJ. PENILE and SCROTAL LYMPHEDEMA as
148 an UNUSUAL PRESENTATION of CROHN'S DISEASE: CASE REPORT and REVIEW of
149 the LITERATURE. *Lymphology*; 2012:37-41. PMID: 22768472

- 150 10. VMIR-MADJLESSI, S, McHENRY, M, FARMER R. Liver Abscess in Crohn's Disease
151 Report of Four Cases and Review of the Literature. GASTROENTEROLOGY. 1986;91(4):987-
152 993. PMID: 3743974
- 153 11. N Narayanan S, Madda J, Johny M, Varga G, Prakash B, Koshy A. Crohn's disease
154 presenting as pyogenic liver abscess with review of previous case reports. Am J Gastroenterol.
155 1998;93(12):2607-2609. doi:10.1111/j.1572-0241.1998.00638.x

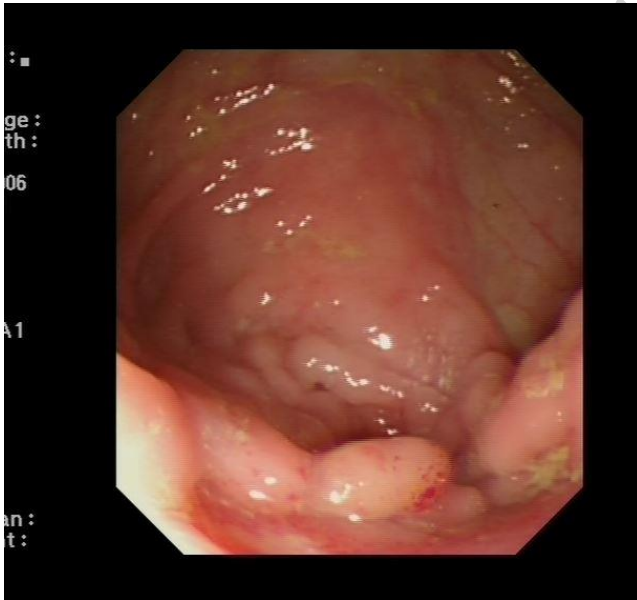
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Figure 1: Abdomen CT scan coronal view local invasion of the colonic mass along with prominent lymph nodes



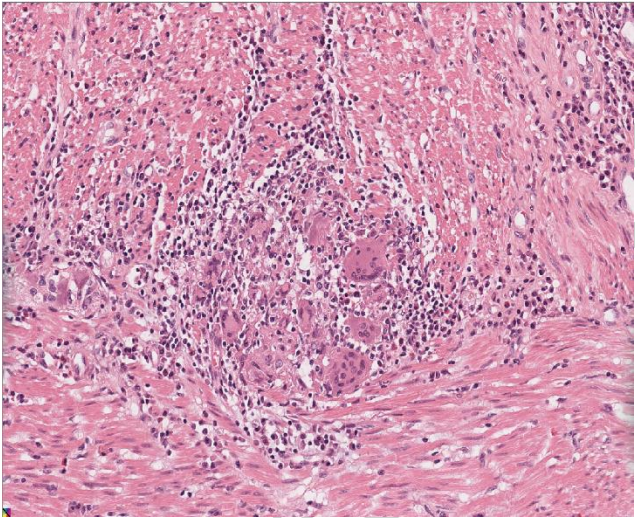
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Figure 2: Colonoscopy. Circumferential colonic wall thickening.



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Figure 3: Gross specimen. Distal transverse colon adherent to the greater curvature of the stomach.



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Figure 4: Histology. Non caseating granuloma showing multi nucleated giant cells and macrophages.