COLORECTAL CANCER OR INFLAMMATORY BOWEL DISEASE?

IrgenTafaj, Frosilda Kola

Service of Gastroenterology-Hepatology, University Hospital Center "Mother Teresa", Tirana, Albania

Correspondent E-mail: irgentafaj@yahoo.com

Abstract

Introduction: Inflammatory bowel disease can have multiple and atypical endoscopic appearances that sometimes can mimic other types of colitis or even colorectal cancer. Ruling out malignancy in these cases might be challenging.

Case report: A 60 years old, female patient without medical antecedents, presented at ER for severe abdominal pain in the right lower quadrant and recent constipation. Blood tests showed slightly elevated inflammatory markers. Colonoscopy revealed a polypoid lesion in proximal ascending colon, macroscopically compatible with a colon cancer. The ileocecal region was impossible to explore. Multiple biopsies were taken. CT scan showed circumferential thickening of the colon walls in caecum and proximal part of ascending colon, which is contrasted after IV contrast injection, slight densification of locoregional adipose tissue and millimetric locoregional lymph nodes. CA 19-9, CEA were normal. Pathology findings were lympho-plasmocytic inflammation in lamina propria, as well as micro abscesses in the crypts. Reactive changes in some crypts with inflammatory background were observed. No malignancy was detected. Pathology findings are compatible with IBD and the patient was put under treatment by corticosteroid-therapy and 5-ASA. A control colonoscopy was performed 3 months later, biopsies of the remained lesion were taken and the diagnosis of Crohn's disease was reconfirmed.

Conclusion: Atypically short, segmentary, isolated location in the colon of IBD can easily be misdiagnosed as colon cancer. In IBD, therapeutic test, repeated colonoscopies with biopsies take precedence over surgical resection for the diagnosis.

Keywords: Inflammatory bowel disease, atypical Crohn's disease, colorectal cancer

KANCERI KOLOREKTAL APO SËMUNDJA INFLAMATORE E ZORRËS?

Abstrakt

Hyrje: Sëmundja Inflamatore e Zorrës (SIZ) shfaqet me paraqitje endoskopike të larmishme dhe atipike që shpeshherë mund të imitojnë kolitet me etiologji të ndryshme, madje dhe kancerin kolorektal. Përjashtimi i malinjancës në këto raste mund të jetë sfidues.

Rast Klinik: Një paciente femër 60 vjeç, pa të dhëna për probleme shëndetësore të mëparshme, paraqitet në Shërbimin e Urgjencës me ankesat dhimbje abdominale të forta dhe konstipacion prej disa javësh. Ekzaminimet laboratorike paraqesin rritje të lehtë të markuesve të inflamacionit. Pacientja iu nënshtrua kolonoskopisë ku u evidentua një lesion polipoid i kolonit ascendent proksimal, makroskopikisht kompatibël me kancer koloni. Regjioni ileocekal ishte i pamundur të eksplorohej. U morën materiale multiple për biopsi. Në skanerin abdominal u vërejt trashje cirkumferenciale e mureve të kolonit në cekum dhe pjesën proksimale të kolon ascendent, që kontrastohej pas kontrastit intravenoz, densifikim i lehtë i indit adipoz lokoregjional dhe limfonoduj milimetrik lokoregjional. Markuesit tumoralë CA19-9, CEA ishin normal. Në ekzaminimin histopatologjik të mostrës rezultoi inflamacion limfo-plazmocitar i lamina propria, mikroabcese të kripteve, pa atipi qelizore. Të dhënat histopathologjike janë në përputhje me Sëmundjen Inflamatore të Zorrës. Pacientes i fillohet trajtimi me kortikoterapi dhe 5-ASA. Kolonoskopia e rikontrollit u realizua pas 3 muajsh dhe u morën sërisht biopsi multiple, që rikonfirmuan diagnozën e Morbus Crohn.

Konkluzion: Sëmundja Inflamatore e Zorrës me prekje segmentare, të shkurtër, atipike të kolonit mund të ngatërrohet lehtësisht me kancerin kolorektal. Në SIZ, testi terapeutik, kolonoskopitë e përsëritura me biopsi kanë përparësi në raport me rezeksionin kirurgjikal për vendosjen e diagnozës.

Fjalë kyçe: Sëmundja inflamatore e zorrës, Morbus Crohn atipik, Kanceri kolorektal

Introduction

Inflammatory bowel diseases (IBD) are chronic immune-mediated diseases with their onset usually during young adulthood and a lifelong course characterized by periods of remission and relapse. The two main forms of IBD are Crohn’s Disease (CD) and Ulcerative Colitis (UC). Crohn’s disease can involve any part of the gastrointestinal tract, but most commonly the ileum and proximal colon. It is represented histologically by chronic discontinuous inflammatory infiltrates with transmural involvement. In contrast, ulcerative colitis, despite having significant shared genetic risk with Crohn’s disease, is characterized primarily by continuous inflammatory lesion that is limited to the submucosa and is restricted to involvement of the colon alone, often with its onset in the rectum and more proximal extension (1). Crohn's disease is a form of IBD with multifactorial pathogenesis involving genetic predisposition, defects in the gut epithelial barrier, dysregulated immune response, and environmental factors. In Crohn's disease, the inflammatory process has a transmural extension that is associated with involvement of the serosa and peri-intestinal adipose tissue (2). It can affect any part of the gastrointestinal tract from the mouth to the anus; 30% of patients present with strict involvement of the small intestine, 20% with involvement of the colon alone, and 50% with involvement of both the small and the large intestine. Crohn’s disease is most commonly seen in the Western developed world. Its incidence has a bimodal distribution with the onset occurring most frequently between ages 15 to 30 years and 40 to 60 years old, more prominent in urban than rural areas (3).

IBD presents with endoscopic appearances of various, atypical forms that can often be confused with colorectal cancer (CRC) (4). Sometimes Crohn's disease and colon cancer might have very similar endoscopic characteristics and it becomes a real challenge for the

clinician to make the right diagnosis (5). Epidemiological and pathological data also indicate that Crohn's disease is associated with a high risk of dysplasia and colorectal cancer, further complicating the differential diagnosis of whether it is a "de novo" malignancy or malignant transformation of Crohn's disease (6).

In this report, an atypical case of Crohn's disease will be described, detailing the clinical course of a female patient, who presented with persistent abdominal pain and constipation.

Case Report

A 60 years old, female patient without medical antecedents, presented at the Emergency Department for severe abdominal pain in the right lower quadrant and recent constipation. She has tried antispasmodic treatment, without effect. The abdominal ultrasound was normal. Colonoscopy performed 3 days later showed a polypoid lesion in proximal ascending colon, macroscopically compatible with a colon cancer. The ileocecal region was impossible to explore, because of this stenotic lesion. Multiple biopsies were taken. The rest of the colon was normal. The necessary laboratory examinations were done and showed slightly elevated inflammatory markers, level of fecal calprotectin 270.79mg/kg, tumor markers CEA, CA19-9 were normal.

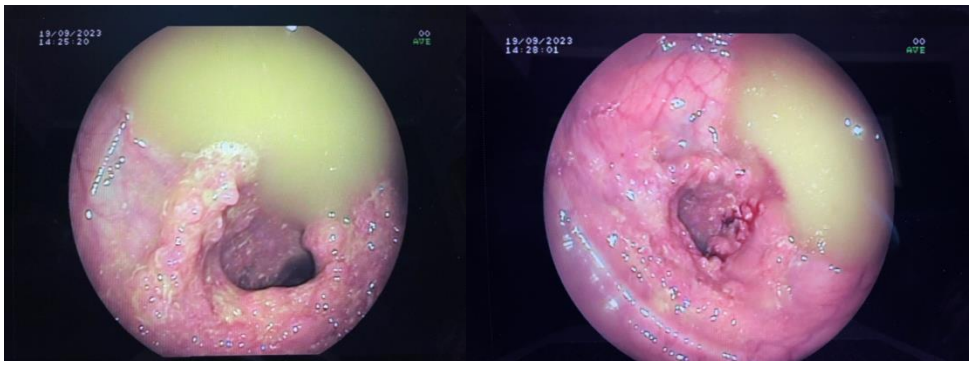

Figure 1. Colonoscopy 1: Polypoid lesion in proximal ascending colon, macroscopically compatible with colon cancer.

CT scan showed circumferential thickening of the colon walls in caecum and proximal part of ascending colon, which enhances after IV contrast injection, slight densification of locoregional adipose tissue and millimetric locoregional lymph nodes. The rest of the colon is normal. Histological description of the biopsy shows lympho-plasmocytic inflammation in lamina propria, as well as micro abscesses in the crypts. Reactive changes in some crypts with inflammatory background were observed. No malignancy was detected. Pathology findings are compatible with IBD and the patient was put under treatment by corticosteroid-therapy and 5-ASA.

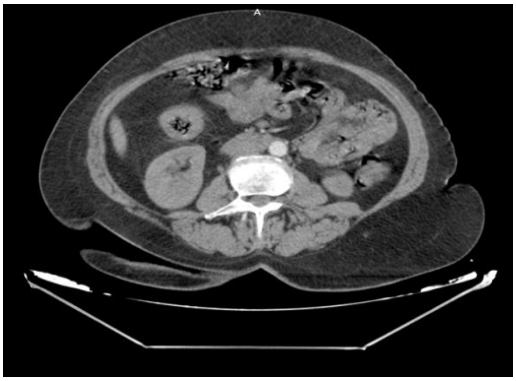

Figure 2. CT scan: circumferential, regular thickening of the colon walls of the cecum and proximal ascending colon, with contrast enhancement and densification of locoregional adipose tissue.

A control colonoscopy was performed 3 months later. The lesion has transformed into a short fibrotic stricture, which allows the passage of the endoscope and the exploration of the ileocecal region. The terminal ileum was normal, but linear and cicatricial lesions were found in the caecum. Biopsies of the remained lesion were taken and the histological description shows fragments of the colonic mucosa with irregular cryptic architecture, focally mild dysplasia but without evidence of invasive or "in situ" malignancy.

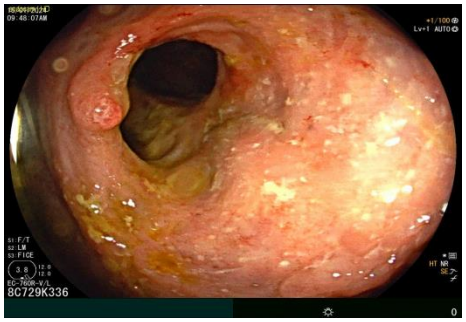

Figure 3. Fibrotic stricture of ascending colon.

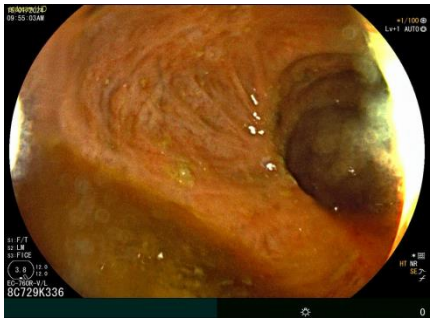

Figure 4. Cicatricial lesions of caecum

Based on the results of the examinations and the clinical and endoscopic response to the treatment, the diagnosis of Crohn's colitis, was reconfirmed. After ruling out any possibility of malignancy, the patient was put under treatment with immunosuppressors and regular follow-up was suggested to her.

Discussion

Crohn's disease and colorectal cancer are colon diseases, that sometimes are difficult to distinguish from one another, not only clinically but also from the macro-endoscopic appearance.

Microscopically, Crohn's disease is characterized by transmural inflammatory thickening of the caecum with inflammatory infiltrates composed mainly of lymphocytes and plasma cells (2).

Macroscopically, it is characterized by inflammatory mucosal lesions interrupted by areas of normal mucosa. The mucosa of inflammatory lesions presents with diverse forms such as mucosal hyperemia, superficial erosions, ulcerations, thickening of the mucosal folds, strictures, fibrosis, fistulas. Ulcers are morphologically described as aphthous, linear, or stellate. Small aphthous ulcers often found near lymphoid follicles coalesce to form larger, deeper linear ulcers with hanging mucosal margins, creating the characteristic "cobblestone appearance" of the mucosa (7). Over time, healing of the ulcers may leave fibrotic scars and, as in ulcerative colitis, inflammatory polyps may form. In complex cases, fissures and fistulous tracts, and intermural or abdominal abscesses, may develop, which are a typical feature of Crohn's disease. In atypical forms, Crohn's disease presents as a vegetative lesion, with circular, fibrotic, bleeding strictures (8). Among the various presentations of Crohn's disease, "pseudopolypoid" CD is a rare occurrence. The exact frequency or prevalence of this form is not well documented in the medical literature due to its rarity (9).

This atypical subtype presents as localized mass within the gastrointestinal tract, often mimicking the appearance of colorectal carcinoma. The main characterizing features behind the pathophysiology of tumefactive, pseudopolypoid Crohn's disease, are cyclical periods of flares and remissions in which inflammation is a key factor. As a result of remitting clinical course, with repeating episodes of exacerbations and remissions, post-inflammatory polyps (pseudopolyps) develop in approximately 10–20% of IBD patients. Pseudopolyps can present as solitary or multiple, of various sizes, and either localized or diffuse in terms of distribution. Pseudopolyposisis usually associated with more severe and longer duration of IBD (9).

In Crohn's disease, patients have a three-fold higher risk of colorectal cancer than the normal population as a result of chronic mucosal inflammation, expressed regeneration of epithelial cells and expressed sporadic mutations (9). The molecular pathway leading to colorectal cancer in IBD appears to differ from the *adenoma-to-CRC* sequences. These cancers appear to arise from either flat dysplastic tissue or dysplasia-associated lesions or masses. The risk of CRC for patients with IBD increases by 0.5-1% yearly, 8-10 years after diagnosis (11).

The case of our patient is one of the rare forms of presentation of Crohn's disease, the polypoid form of Crohn's colitis. The short polypoid, stenotic, bleeding lesion, limited to the right colon, in a patient with no previous medical history are elements in favor of colorectal cancer diagnosis. The histological examination in this case was crucial in the diagnosis and it made a surprising plot twist. It showed fragments of the colonic mucosa with pronounced lympho-plasmocytic inflammation in the lamina propria as well as pronounced micro-abscesses in the crypts, reactive changes of some crypts in the background of inflammation, but without cellular atypia, suggesting the diagnosis of Crohn's disease. The histological examination was reconfirmed a second time and repeated endoscopic examination were performed to exclude any possibility of malignancy. The therapeutic test was also in favor of atypical form of Crohn's disease, the lesion changed dramatically under anti-inflammatory drugs, leaving inflammatory scars in the caecum, characteristic of remission phase in inflammatory bowel disease.

Based on the data of clinical case similar studies and the scientific literature, in patients with a short clinical history of inflammatory disease, with a segmentary lesion limited to the right colon, should exclude the possibility of a "de novo" malignancy or on pre-existing inflammatory disease (10). To achieve this challenging differential diagnosis, a detailed

evaluation of clinical features, laboratory, imaging, endoscopic and histological examinations by a multidisciplinary medical team is required.

Conclusion

Crohn's disease has different endoscopic presentations, including atypical forms. Atypically short, segmentary, isolated location in the colon of inflammatory bowel disease can easily be misdiagnosed as colon cancer. The case highlights the importance of considering pseudopolypoid Crohn's colitis in the differential diagnosis of patients presenting with abdominal pain and what appears to be a colonic mass. In inflammatory bowel disease, therapeutic tests, repeated colonoscopies with biopsies take precedence over surgical resection for the diagnosis.

Conflict of interest: None

References

1. Timothy C. Wang, M.Camilleri, B.Lebwohl, K.K. Wang, - Yamada's Textbook of Gastroenterology, 7th Edition/1232
2. Sleisenger and Fordtran's Gastrointestinal and Liver -- Mark Feldman MD, Lawrence S_ Friedman MD, Lawrence J_ Brandt -- 11, 2020 – Elsevier/1897
3. Baumgart DC, Sandborn WJ. Crohn's disease [published correction appears in Lancet. 2013 Jan 19;381(9862):204]. Lancet. 2012;380(9853):1590-1605. doi:10.1016/S0140-6736(12)60026-9
4. Crohns colitis foundation.org/education-resources/ibd-mimics-most-common-conditions-misdiagnosed-ibd-Jan 2020
5. Chen, W., Chao, S., & Wang, M. (2016). A Right Colon Adenocarcinoma Case Mimicking Crohn's Disease: A Case Report. https://doi.org/10.14309/00000434-201610001-01332
6. Ankouz A, Majdoub KI, Ousadden A, Mazaz K, Taleb KA. Colonic adenocarcinoma revealing Crohn's disease: a case report. J Med Case Rep. 2010;4:167. Published 2010 Jun 1. doi:10.1186/1752-1947-4-167
7. American Society for Gastrointestinal Endoscopy Standards of Practice Committee. Shergill AK, Lightdale JR, Bruining DH, Acosta RD, Chandrasekhara V, Chathadi KV, Decker GA, Early DS, Evans JA, Fanelli RD, et al. The role of endoscopy in inflammatory bowel disease. Gastrointest Endosc. 2015;81:1101–1121.e1-13.
8. Annese V, Daperno M, Rutter MD, Amiot A, Bossuyt P, East J, Ferrante M, Götz M, Katsanos KH, Kießlich R, et al. European evidence based consensus for endoscopy in inflammatory bowel disease. J Crohns Colitis. 2013;7:982–1018
9. Politis DS, Katsanos KH, Tsianos EV, Christodoulou DK. Pseudopolyps in inflammatory bowel diseases: Have we learned enough?. World J Gastroenterol. 2017;23(9):1541-1551. doi:10.3748/wjg.v23.i9.1541
10. Ansari AZ, Razzak S, Patibandla S, Kumar S, Hafeez S, Kratz K. Tumefactive Crohn's Disease Mimicking Colon Carcinoma in a Young Female: A Case Report. Cureus. 2024;16(1):e52221. Published 2024 Jan 13. doi:10.7759/cureus.52221
11. Bernstein D, Rogers A. Malignancy in Crohn's disease. Am J Gastroenterol. 1996;91(3):434-440.