

## Atypical presentation of late-onset Crohn's Disease following colon cancer diagnosis

Published on 16.05.2022

**DOI:** 10.35100/eurorad/case.17725

**ISSN:** 1563-4086

**Section:** Abdominal imaging

**Area of Interest:** Abdomen Gastrointestinal tract

**Procedure:** Comparative studies

**Procedure:** History

**Imaging Technique:** CT

**Special Focus:** Inflammation Case Type: Clinical Cases

**Authors:** Lúcia Samouco, Adriano Novais de Carvalho,  
Sofia Dimitri Pinheiro, Maria João Magalhães

**Patient:** 70 years, female

### Clinical History:

A 70-year-old woman presented with new-onset fever and aggravated abdominal pain, diarrhoea, and anaemia. She had a prior history of surgery for a cecal adenocarcinoma 8 years earlier and surgery for sigmoid adenocarcinoma and bowel stenosis at the previous ileocolic anastomosis three months earlier, followed by adjuvant chemotherapy with capecitabine. The sigmoid adenocarcinoma was graded T3N1 at histology; the resected ileocolic stenosis revealed inflammation, ulceration, but no cancer cells.

### Imaging Findings:

CT studies were performed without intravenous contrast due to prior history of allergic reaction.

Post-surgical CT performed 3-months earlier (fig. 1-2) showed intra-abdominal fluid collected in the right iliac fossa (RIF) with gas bubbles inside, mesenteric fat stranding in RIF, and free abdominal fluid in pelvic cavity. A post-surgical abscess with peritonitis was therefore diagnosed and the patient clinically improved with antibiotics.

When the patient came to our attention, CT performed in the acute setting revealed (fig. 3-4): concentric wall thickening and wall stranding of a terminal ileum segment, mesentery fat stranding and multiple lymph nodes in RIF. We then raised the suspicion of acute ileitis. The patient improved with corticosteroid and capecitabine toxicity was assumed as the causative mechanism. However, pathologic reexamination of the ileocolic segment discovered granulomas diagnostic of Crohn's Disease (CD).

### Discussion:

Crohn's Disease is a chronic inflammatory bowel disease (IBD) characterized by transmural inflammation presenting anywhere in the gastrointestinal tract. [1] Its incidence peaks in young adults and then decreases. [2]

Diagnosing late-onset CD (>60-years-old) can be challenging and patients may have symptoms for many years before diagnosis: average time is 6 years. [3] Late-onset CD is believed to represent 10-18% of all cases and CD prevalence is increasing in older populations. [4,5] Disease presentation may be similar across all age groups. [2]

The broad differential diagnosis of CD in the elderly is partially responsible for the diagnostic challenge, the multiple comorbidities are also accountable. [2,3] Other more frequent pathologies may coexist and be accounted for the CD symptoms (ex: diverticular disease, bowel ischemia, bowel neoplasms, NSAID colitis, microscopic colitis, or infectious enteritis/colitis). [2,3]

We present a 70-year-old patient with overlooked right ileocolic CD with stenotic features and an unsuspected flare. Looking back to patient's history there were already some clues: progressing intestinal obstructive symptoms and long-lasting anemia. Metachronous colic adenocarcinomas confounded the picture in our case, masquerading the chronic anemia and intestinal obstructive symptoms. Subsequent chemotherapy, with capecitabine, provided a likely explanation for ileitis: a reported secondary effect of this drug.

Compared to younger patients, late-onset CD affects the colon more frequently, and more often presents a non-stenotic/non-fistulizing behavior, yet all CD phenotypes are possible. [3,4,5] Complications occur in 1/3 of patients and surgery rates are the same as in younger patients. [4,5] Bowel adenocarcinoma and lymphoma are malignant complications of concern in the elderly. [2,5]

Cross-sectional imaging is an important tool to diagnose and characterize CD, complementing endoscopic evaluation. [2,6] CT and Magnetic Resonance Enterography are the most valuable ones and can define the extent of the disease, its complications, inflammatory activity, or the therapeutic response [6]. Importantly imaging findings of CD are similar across age groups.

Segmental bowel wall thickening and hyperenhancement, mesenteric fat stranding or lymph node enlargement, increased vascularity of vasa recta (comb sign) are CD manifestations. Bowel wall thickening may be marked in the acute phase (>2cm) and associated with wall layering due to edema (hypersignal on T2). Other findings like fistulas, sinus tracts, mucosal ulceration, luminal narrowing with upstream dilatation, signs of diminished motility, abscesses or fibrofatty proliferation might suggest the diagnosis. [6,7,8,9]

Diagnosing CD can be particularly difficult in the elderly because it can be confused with other conditions. Early recognition of CD and its complications may significantly alter the prognosis and treatment and limit their impact in this vulnerable population. [2]

**Differential Diagnosis List:** Crohn's Disease, Infectious terminal ileitis , Toxic terminal ileitis (due to capecitabine) , Small bowel lymphoma , Adenocarcinoma relapse

**Final Diagnosis:** Crohn's Disease

#### **References:**

- Petagna, L., Antonelli, A., Ganini, C., Bellato, V., Campanelli, M., & Divizia, A. et al. (2020). Pathophysiology of Crohn's disease inflammation and recurrence. *Biology Direct*, 15(1). (PMID: [33160400](#))
- Picco, M., & Cangemi, J. (2009). Inflammatory Bowel Disease in the Elderly. *Gastroenterology Clinics Of North America*, 38(3), 447-462. (PMID: [19699407](#))
- Katz, S., & Pardi, D. (2011). Inflammatory Bowel Disease of the Elderly: Frequently Asked Questions (FAQs). *American Journal Of Gastroenterology*, 106(11), 1889-1897. (PMID: [21862997](#))
- Viola, A., Monterubbiansi, R., Scalisi, G., Furfaro, F., Rea, M., & Saibeni, S. et al. (2019). Late-onset Crohn's disease: a comparison of disease behaviour and therapy with younger adult patients: the Italian Group for the Study of Inflammatory Bowel Disease 'AGED' study. *European Journal Of Gastroenterology & Hepatology*, 31(11), 1361-1369. (PMID: [31567640](#))

Afzali, A., & Katz, S. (2018). Inflammatory Bowel Disease in the Baby to Baby Boomer: Pediatric and Elderly Onset of IBD. *Current Treatment Options In Gastroenterology*, 16(3), 289-305. (PMID: [30006766](#))

Bruining, D., Zimmermann, E., Loftus, E., Sandborn, W., Sauer, C., & Strong, S. (2018). Consensus Recommendations for Evaluation, Interpretation, and Utilization of Computed Tomography and Magnetic Resonance Enterography in Patients With Small Bowel Crohn's Disease. *Radiology*, 286(3), 776-799. (PMID: [29319414](#))

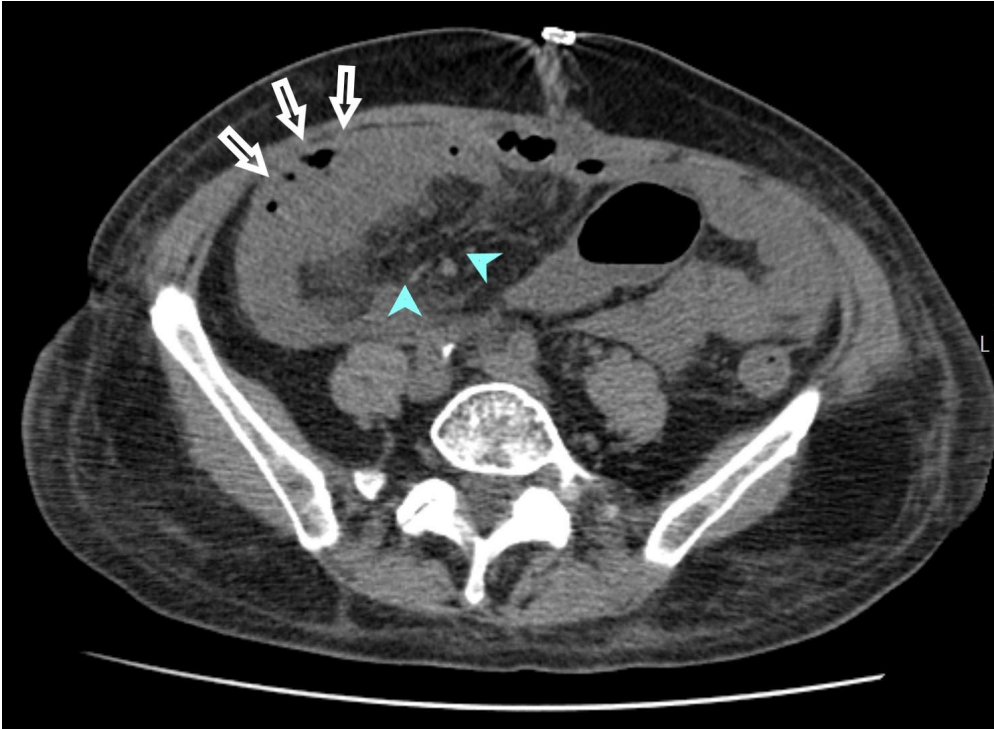
Furukawa, A., Saotome, T., Yamasaki, M., Maeda, K., Nitta, N., & Takahashi, M. et al. (2004). Cross-sectional Imaging in Crohn Disease. *Radiographics*, 24(3), 689-702. (PMID: [15143222](#))

Hoeffel, C., Crema, M., Belkacem, A., Azizi, L., Lewin, M., Arrivé, L., & Tubiana, J. (2006). Multi-Detector Row CT: Spectrum of Diseases Involving the Ileocecal Area. *Radiographics*, 26(5), 1373-1390. (PID: 16973770)

Guglielmo, F., Anupindi, S., Fletcher, J., Al-Hawary, M., Dillman, J., & Grand, D. et al. (2020). Small Bowel Crohn Disease at CT and MR Enterography: Imaging Atlas and Glossary of Terms. *Radiographics*, 40(2), 354-375. (PMID: [31951512](#))

**Figure 1**

a



**Description:** Axial CT without contrast. Intra-abdominal fluid collected in the RIF, with air inside, is seen (arrows) next to an ileal segment. Note the mesenteric fat stranding (arrowheads) **Origin:** Department of Radiology, Instituto Português de Oncologia do Porto FG, EPE, Portugal, 2021

**Figure 2**

a



**Description:** Axial CT without contrast. Free fluid in the abdominal cavity (arrows) **Origin:** Department of Radiology, Instituto Português de Oncologia do Porto FG, EPE, Portugal, 2021

**Figure 3**

a



**Description:** Coronal CT without contrast. Terminal ileal segment with wall thickening (arrows). Mesentery fat stranding and multiple small reactive lymph nodes (arrowheads) **Origin:** Department of Radiology, Instituto Português de Oncologia do Porto FG, EPE, Portugal, 2021

**Figure 4**

a



**Description:** Axial CT without contrast. Note an affected small bowel segment on the left (arrowhead) and an upstream small bowel segment with normal wall thickness anteriorly (arrows) **Origin:** Department of Radiology, Instituto Português de Oncologia do Porto FG, EPE, Portugal, 2021