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CASE REPORT | COLON

A Rare Presentation of Sarcoidosis Masquerading as Colonic Polyps on Screening Colonoscopy

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ABSTRACT

Sarcoidosis is a systemic disease characterized by noncaseating granulomatous inflammation. Gastrointestinal involvement in sarcoidosis is a very rare occurrence, with the colon being affected in few patients. We present a case of sarcoidosis presenting as multiple colonic polyps found on routine colorectal cancer screening colonoscopy. Histopathology of the polyps showed noncaseating granulomas.

INTRODUCTION

Sarcoidosis is a systemic disease of unknown origin characterized by the formation of noncaseating granulomas. The most commonly affected sites are lungs and intrathoracic lymph nodes, but other common sites include the liver, spleen, eyes, and peripheral lymph nodes.[1] Diagnostic criteria typically include radiologic evidence of intrathoracic lymphadenopathy, histopathologic evidence of noncaseating granulomas, and exclusion of other diseases causing granuloma formation.[1] Gastrointestinal (GI) involvement of sarcoidosis is uncommon. There are only a few reported cases in the literature. If there is GI tract involvement, concomitant pulmonary disease is likely present.[2] Previous reports in the literature have estimated that symptomatic GI involvement occurs in 0.1%–0.9% of sarcoidosis cases.[3–5] Subclinical GI involvement may occur in 5%–10% of cases.[3] Any portion of the GI tract can be affected.[2,5] The stomach is the most commonly affected segment; there are approximately 60 biopsy-proven cases in the literature.[5] Sarcoidosis of the colon comprises an even smaller percentage of GI sarcoidosis and can present similar to other colonic diseases.[2] Symptoms can include constipation, diarrhea, abdominal pain, distention, and hematochezia.[2] Symptoms attributed to sarcoidosis of the colon typically respond well to glucocorticoids.

CASE REPORT

A 48-year-old African American man with hypertension and hyperlipidemia presented for an average-risk screening colonoscopy. He had no family history of colon cancer and was a nonsmoker. Eight sessile colon polyps ranging from 3 to 8 mm were endoscopically resected using cold snare polypectomy: 1 polyp was resected from the ascending colon, 5 from the descending colon, and 2 from the rectosigmoid colon (Figure 1). No strictures or ulceration was visualized in the colon. Histopathologic examination of the polyps showed abundant granulomatous inflammation characterized by confluent histiocyte aggregates without associated necrosis (Figure 2). Fite and Grocott methenamine silver (GMS) stains for microorganisms were negative (Figure 2). At the time of presentation, the patient reported no pulmonary, GI, or systemic symptoms that would be suggestive of sarcoidosis. Further chart review revealed that the patient underwent a left conjunctival biopsy 3 years before the screening colonoscopy for a conjunctival lesion found during a follow-up ophthalmology appointment. Microscopic examination of the biopsy showed chronic and granulomatous inflammation. Acid-fast bacilli, GMS, and gram stains showed no microorganisms. In situ hybridization for kappa and lambda light chains demonstrated no evidence of light chain restriction. Flow cytometry showed a predominance of T cells with CD2, CD3, and CD7 retention and a normal CD4:CD8 ratio, and no significant B-cell population was present. Thus, the conjunctival

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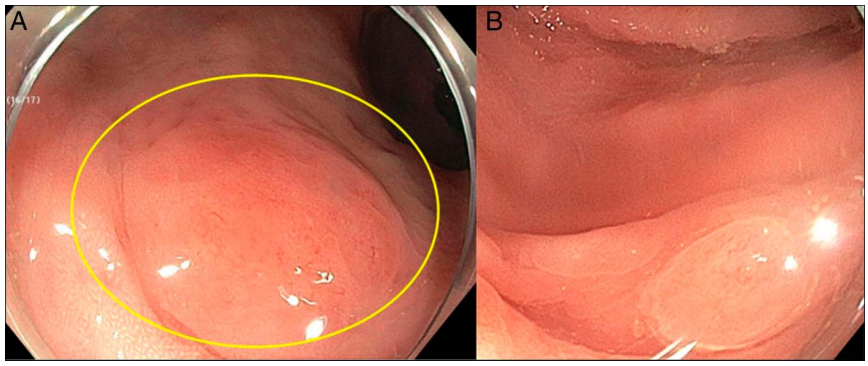

Figure 1. Colonoscopy showing (A) an 8 mm rectosigmoid polyp and (B) a 6 mm ascending colon polyp.

biopsy showed no evidence of malignancy, and the granulomas were believed to represent changes associated with chronic inflammation. After the screening colonoscopy results, our patient underwent a chest x-ray, which showed a possible left lower lobe calcified granuloma. To better characterize this lesion, chest computed tomography was performed and showed scattered, noncalcified, sub 5-mm nodules in the bilateral lungs; a 7 mm perifissural nodule at the left upper lobe with central calcification; and bilateral axillary, supraclavicular, and chest wall lymphadenopathy along with bilateral hilar, right paratracheal, and right para-aortic lymphadenopathy. Some of these lymph nodes showed internal calcification. Based on these findings, our patient was referred to a pulmonologist, where pulmonary function tests were within normal limits. Laboratory testing initiated at this visit was notable for a low 25-OH vitamin D level, normal 1,25-OH vitamin D level, normal calcium level, and normal complete blood count. A baseline serum angiotensin-converting enzyme (ACE) level was not available. Altogether, his workup, notable for noncaseating granulomas of the colonic mucosa, radiologic evidence of lung and intrathoracic lymphadenopathy, and lack of both clinical symptoms and histopathologic staining indicating other possible etiologies, is sufficient for a diagnosis of sarcoidosis. Through a discussion with his pulmonologist, the patient decided against initiating corticosteroid therapy because his laboratory test results were reassuring and he remained without symptoms. We plan to have the patient resume colorectal cancer screening at a regular interval of 10 years and follow up with the pulmonologist periodically for the surveillance of disease progression.

DISCUSSION

Colonic sarcoidosis is extremely rare. Only 3% of the patients with sarcoidosis will have GI involvement, and less than 20% of these cases will involve the colon.[6] Through a review of PubMed, we found 18 cases of colonic sarcoidosis. Only 3 of the

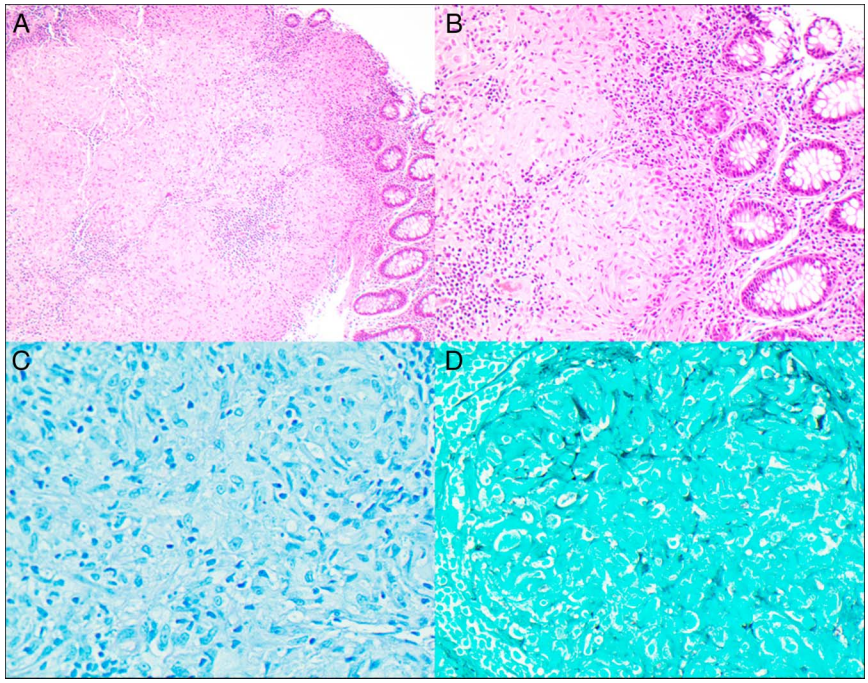

Figure 2. Hematoxylin and eosin-stained sections revealed noncaseating granulomatous inflammation underlying normal colonic mucosa (A: ×100; B: ×200). Fite staining was negative for mycobacteria (C: ×400) while Grocott methenamine silver (GMS) staining was negative for fungal organisms (D: ×400).

cases involved asymptomatic patients like our case. Unlike our patient, those 3 were already carrying a known diagnosis of pulmonary sarcoidosis before discovery of their colonic involvement. This case is unique in that the patient was asymptomatic and was not already known to have any pulmonary disease at the time of diagnosis of his colonic sarcoidosis. Noncaseating granulomas occurring in the colon can manifest as normal mucosa or as polyps, nodules, ulcers, and plaques. Symptom severity of GI sarcoidosis ranges from subclinical to severely symptomatic.[7–9] Specifically, colonic sarcoidosis may cause constipation, hematochezia, or iron deficiency anemia.[10–12] Colonic narrowing and mechanical obstruction have been reported, with multiple cases identifying sarcoidosis resulting in acute appendicitis and perforation.[13] Sarcoidosis of the appendix and rectum is reported less frequently, even among patients with colonic sarcoidosis.[6] The differential for colonic sarcoidosis is limited. Grossly, these masses may appear as adenocarcinoma, although there are no data to suggest that sarcoidosis increases the risk of colorectal cancer. Surgical resection may be indicated, regardless in the cases where biopsy does not provide a clear diagnosis. One review of 20 cases has found an association between ulcerative colitis and systemic sarcoidosis.[14] Noncaseating granulomas can be found in sarcoidosis and Crohn's disease, and the 2 can be difficult to differentiate clinically and histologically.[15] In our case, the extensive and confluent nature of the granulomas was more consistent with sarcoidosis, and there was no associated cryptitis to suggest Crohn's disease. Evaluation for pulmonary involvement with imaging and pulmonary function tests is indicated when any extrapulmonary sarcoidosis is found, even if the patient has no pulmonary symptoms. While diagnostic criteria for sarcoidosis include radiologic evidence of hilar or mediastinal lymphadenopathy, pathologic evidence of noncaseating granulomas, and exclusion of other diseases causing noncaseating granulomatous inflammation, there exists no universal agreement on measures to fully satisfy each criterion.[16] We believe our patient reasonably satisfied all of these criteria. Treatment is not indicated for asymptomatic sarcoidosis patients.[1] Corticosteroids often yield a favorable therapeutic response and remain the treatment of choice for symptomatic disease.[6]

DISCLOSURES

Author contributions: O. Ufondu and N. Hillerson wrote the article. MJ Shwetar and D. Kumral edited and revised the article. A. Mills, D. Kumral, and O. Ufondu added the images and legends for the figures. D. Kumral is the article guarantor.

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REFERENCES

1. Soto-Gomez N, Peters JI, Nambiar AM. Diagnosis and management of sarcoidosis. *AM Fam Physician.* 2016;93(10):840–50.
2. Daldoul S, Triki W, El Jeri K, Zaouche A. Unusual presentation of a colonic sarcoidosis. *Case Rep Med.* 2012;2012:169760.
3. Wu H, Shen B. Endoscopic and histologic evaluation of the gastrointestinal tract in patients with sarcoidosis. *Eur J Gastroenterol Hepatol.* 2021;33(5):639–44.
4. Sun H, Makker J, Patel H, Mantri N, Hussain AN, Abbas N. A rare case of colonic sarcoidosis presenting as a mass. *Case Rep Gastrointest Med.* 2020;2020:8882863.
5. Ungprasert P, Ryu JH, Matteson EL. Clinical manifestations, diagnosis, and treatment of sarcoidosis. *Mayo Clin Proc Innov Qual Outcomes.* 2019;3(3):358–75.
6. Brito-Zeron P, Bari K, Baughman RP, Ramos-Casals M. Sarcoidosis involving the gastrointestinal tract: Diagnostic and therapeutic management. *Am J Gastroenterol.* 2019;114(8):1238–47.
7. Vahid B, Spodik M, Braun KN, Ghazi LJ, Esmaili A. Sarcoidosis of gastrointestinal tract: A rare disease. *Dig Dis Sci.* 2007;52(12):3316–20.
8. Vohra I, Almoghrabi A, Katiyar V, et al. An unusual histopathology of colonic polyps. *Am J Gastroenterol.* 2019;114:809–10.
9. Hilzenrat N, Spanier A, Lamoureux E, Bloom C, Sherker A. Colonic obstruction secondary to sarcoidosis: Nonsurgical diagnosis and management. *Gastroenterology.* 1995;108(5):1556–9.
10. Te HS, Campbell L, Chohan S. Infliximab therapy for hepatic and intestinal sarcoidosis. *Gastroenterol Hepatol (N Y).* 2007;3(6):447–52.
11. Beniwal RS, Cummings OW, Cho WK. Symptomatic gastrointestinal sarcoidosis: Case report and review of the literature. *Dig Dis Sci.* 2003;48(1):174–8.
12. Veitch AM, Badger I. Sarcoidosis presenting as colonic polyposis: Report of a case. *Dis Colon Rectum.* 2004;47(6):937–9.
13. Policha A, Hu C, Holmes P, Cohn JR, Martin ND. Acute perforated appendicitis secondary to sarcoidosis. *Am Surg.* 2012;78(5):616–9.
14. Jarrot PA, Dury S, Rakotomalala A, et al. Association of sarcoidosis and ulcerative colitis: A review of 20 cases. *Sarcoidosis Vasc Diffuse Lung Dis.* 2013;30(3):212–6.
15. Rubin JN, George LA, Cross RK, Wong U. Sarcoidosis mimicking Crohn disease. *Crohns Colitis.* 2019;3601(3):otz041.
16. Crouser ED, Maier LA, Wilson KC, et al. Diagnosis and detection of sarcoidosis. An official American Thoracic Society Clinical Practice Guideline. *AM J Respir Crit Care Med.* 2020;201(8):e26–1.