

Case Report

A Case of Colonic Vasculitis Mimicking IBD in a 45-Year-Old Female: A Clinical Case Report

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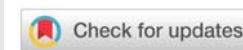
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Abstract

Colonic vasculitis is a rare condition that can mimic Inflammatory Bowel Disease (IBD) due to its clinical presentation. We report the case of a 45-year-old female, a passive smoker, presenting with isolated colonic vasculitis manifested by bloody mucus diarrhea. Investigations, including colonoscopy and histopathology, allowed the differentiation of this vasculitis from IBD. The patient was successfully treated with systemic corticosteroid therapy, leading to significant clinical improvement. This case highlights the importance of precise diagnosis in atypical presentations and the potential role of passive smoking in triggering such pathologies.

Introduction

Intestinal vasculitis represents a rare and often underrecognized pathological entity. Its clinical presentation can mimic other gastrointestinal disorders, particularly Inflammatory Bowel Disease (IBD). This case illustrates an isolated colonic vasculitis diagnosed in a 45-year-old female initially suspected of having IBD.

Case presentation

The patient's medical history was notable for prolonged passive smoking, which is known for its vasculotoxic effects. She had no prior history of inflammatory, autoimmune, or infectious diseases and was not on any regular medication. Her eating habits were normal without any specific dietary restrictions. The presenting symptoms included mucous and bloody diarrhea, occurring 4–5 times per day, with a relapsing–remitting pattern over a period of three years.

Additional investigations revealed a moderate inflammatory syndrome with elevated CRP levels but no specific hematological abnormalities. Imaging studies did not

detect any anomalies. Colonoscopy demonstrated segmental involvement of the left colon with polypoid lesions exhibiting a violaceous surface, accompanied by vascular lesions on an erythematous and atrophic mucosa. Biopsy findings indicated perivascular inflammation with neutrophilic infiltration of small vessel walls, without any evidence of granulomas or cryptitis characteristic of Inflammatory Bowel Disease (IBD). The patient showed significant clinical improvement following systemic corticosteroid therapy. Follow-up analyses conducted over six months indicated sustained remission with no recurrence of symptoms. Other potential causes of vasculitis, such as Hepatitis C, Coeliac disease, and other autoimmune diseases, were systematically excluded through appropriate serological testing. There were no clinical or laboratory features suggestive of other types of vasculitis, such as Polyarteritis Nodosa (PAN) or ANCA-Associated Vasculitis (AAV).

Discussion

Colonic vasculitis is a rare manifestation of systemic vasculitides, although it can also present as an isolated condition. The inflammation of intestinal blood vessels typically leads to ischemic and ulcerative lesions. The underlying mechanisms

involve abnormal immune activation and the deposition of immune complexes within vascular walls, contributing to the pathogenesis of the disease [1]. Epidemiologically, colonic vasculitis is uncommon, and its isolated presentation poses diagnostic challenges, often leading to delays in treatment [2].

Passive smoking has emerged as a noteworthy risk factor in the context of vascular inflammatory disorders. It has been associated with endothelial dysfunction, promoting a pro-inflammatory state and increasing the risk of microthrombosis [3]. Although limited data are available, the correlation between passive smoking and the exacerbation of inflammatory vascular diseases suggests a significant impact on disease progression, underscoring the need for further research in this area [4].

Differential diagnosis between colonic vasculitis and inflammatory bowel disease (IBD), including Crohn's disease and ulcerative colitis, can be challenging due to overlapping symptoms such as bloody diarrhea, abdominal pain, and colonic inflammation. However, distinguishing features are present both clinically and histopathologically (Table 1). Colonic lesions in IBD tend to be diffuse or continuous, whereas in colonic vasculitis, lesions are segmental with evidence of ischemia [5]. Histologically, IBD typically shows cryptitis and granulomas, contrasting with isolated vascular inflammation seen in colonic vasculitis [6]. Additionally, biomarkers such as perinuclear anti-neutrophil cytoplasmic antibodies (pANCA) and anti-Saccharomyces cerevisiae antibodies (ASCA) may be positive in IBD but are often negative in vasculitis [7].

Management of isolated colonic vasculitis primarily involves systemic corticosteroid therapy, recommended as the first-line treatment at an initial dose of 1 mg/kg/day [8]. Supportive care including hydration, analgesics, and correction of electrolyte imbalances is also crucial. Preventive strategies focus on avoiding known risk factors, particularly active and passive smoking, to reduce the likelihood of relapse. Delayed diagnosis and treatment can lead to severe complications such as bowel perforation or stricture formation [9].

Clinically, this case emphasizes the importance of early and precise diagnosis through histopathology, given the significant overlap of symptoms with IBD. Increased clinician awareness is critical to consider isolated vasculitis as a differential diagnosis in patients presenting with atypical IBD symptoms. Additionally, other potential risk factors such as infections, medications (e.g., nonsteroidal anti-inflammatory drugs), and genetic predispositions should be explored in further research [10]. This case highlights the need for additional studies to clarify the potential links between passive smoking and vasculitis, which could inform future preventative and therapeutic strategies.

Table 1: Differential Characteristics of IBD and Colonic Vasculitis.

Characteristics	IBD	Colonic Vasculitis
Colonic Lesions	Diffuse or continuous	Segmental, with ischemia
Histopathology	Cryptitis, granulomas	Isolated vascular inflammation
Biomarkers	pANCA, ASCA sometimes positive	Often negative [7]

Conclusion

This case illustrates colonic vasculitis mimicking IBD in a 45-year-old female with a history of passive smoking. The atypical presentation required extensive investigations to establish an accurate diagnosis. Early corticosteroid therapy led to rapid improvement, emphasizing the importance of considering this rare etiology in refractory hemorrhagic diarrhea.

Ethical considerations

Written informed consent was obtained from the patient for the publication of this case report and any accompanying images.

Acknowledgment

Although AI-generated tools were used to generate this Article, the concepts and central ideas it contains were entirely original and devised by a human writer. The AI merely assisted in the writing process, but the creative vision and intellectual property belong to the human author.

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