

Troublesome Worms - A Case Report on Strongyloides Infection with IBD

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Abstract

Strongyloidiasis is an infectious disorder caused by the nematode *Strongyloides stercoralis*, which is endemic in subtropical and tropical regions with poor sanitary conditions. Autoinfection caused by *Strongyloides stercoralis* frequently becomes a life-long disease unless it is effectively treated. This is a case of *Strongyloides* infection causes the clinical and pathologic features of inflammatory bowel disease. A 52-year-old male, farmer by occupation, on alcoholic, nonsmoker came with complaints of fever since 2 weeks, on and off. Bleeding in rectum since 3 months, cough without expectoration since 3 days. Abdominal pain-intermittent, epigastric since 3 days. He is also reported with generalized fatigue. Duodenal biopsy showed strongyloides, colonoscopy result showed mucosal erythema with edema and loss of vascularity is noted, Multiple aphthous ulcerations with left sided involvement more than the right side involvement and biopsies taken and the impression was pancolitis -IBD (Ulcerative colitis)MAYO 2 and biopsy features suggestive of inflammatory exudate pointing

towards Inflammatory bowel disease. The discussion was found to be *Strongyloides* infection with IBD (ulcerative colitis). The main concern is in a case of IBD whether to start him on steroids or not. Since corticosteroids will worsen his infection causing hyper infection. Use of mesalamine has known to reduce symptoms but not to cause hyper infection. Cyclosporine is a good alternative for corticosteroids therapy. This case highlights the significance of identifying the intersecting clinical and pathologic features of *Strongyloides* and inflammatory bowel disease. A high index of suspicion and recognition of particular histological findings, including eosinophilic microabscesses, aid in the correct diagnosis. Decisive diagnosis is crucial as each disease carries diverse therapeutic allegations and outcome.

Keywords: *Strongyloides*, Ulcerative colitis, inflammatory bowel disease, corticosteroids therapy

Introduction

Strongyloides stercoralis is a nematode which predominantly affects immunocompromised individuals. It is common in developing countries. Very rarely found in

developed countries. Epidemiologically found in the south east asian countries like thailand cambodia laos Vietnam^(1,2). Pockets of strongyloides are also seen in australia along the northwestern coast. *S. stercoralis* is also reported to cause infection in cats, dogs. Strongyloides is one of the parasites which are heterogonic in nature. They don't need a host to reproduce. They are also parthenogenetic and they have sensors for urocanic acid which is a metabolite of histidine which can be found in skin shedding cells and its concentration is more in case of soles. It causes autoinfection in the host^(3,4).

Case discussion

A 52-year-old male, farmer by occupation, on alcoholic, nonsmoker came with complaints of fever since 2 weeks, on and off, relieved with paracetamol, no evening rise of temperature, Bleeding in rectum since 3 months, cough without expectoration since 3 days' Abdominal pain-intermittent, epigastric since 3 days, no complaints of vomiting, loose stools and history of nausea present. He is also reported with generalized fatigue. He is conscious, oriented, pallor present, pulse rate-76 beats/min, blood pressure -110/60 mm Hg, CVS-S1, S2+ve, RS-B/L NVBS+ve, B/L wheeze present. His abdomen soft, bowel sounds were found to be normal, no organomegaly, epigastric tenderness present, CNS-NFND, P/R-healed anterior fissures, no sphincter spasm, rectum-stools+, non-bloodstained Routine investigations were sent for lab investigation.

His hematocrit results showed HB-9.3, PCV-29.2, TC-9800, DC-P63.1, L22.9, E3.1, M10.7, B0.2, MCV-75.8, MCH-24.0, Platelets-5.55. Viral markers test negative and RBS-96 mg/dl. BUN 9, Creatinine 0.5, Na 138, K 4.1, Cl 99, hco3 28, Total bilirubin 0.49, direct bilirubin 0.11, SGOT-20, SGPT-25, Protein 5.9, Albumin

3.1, Globulin 2.7, Alkaline phosphatase 82 CXR-Normal. ECG was normal. Peripheral smear showed microcytic hypochromic anemia He was started on inj. Encifer and nebulization's for wheeze. USG abdomen and pelvis was done and it was normal. UGI scopy showed erythematous gastritis and duodenal lymphangiectasia. Duodenum-Speckled appearance of mucosa and biopsy was taken for further analysis. Patient was then planned for colonoscopy, since patients wheeze didn't improve, patient was started on steroids. Duodenal biopsy showed strongyloides and the patient was started on Ivermectin 12 gm 1-0-0 x 3 days, colonoscopy result showed mucosal erythema with edema and loss of vascularity is noted, Multiple aphthous ulcerations with left sided involvement more than the right side involvement and biopsies taken and the impression was pancolitis -IBD (Ulcerative colitis) MAYO 2 and biopsy features suggestive of inflammatory exudate pointing towards Inflammatory bowel disease. The discussion was found to be Strongyloides infection with IBD (ulcerative colitis).

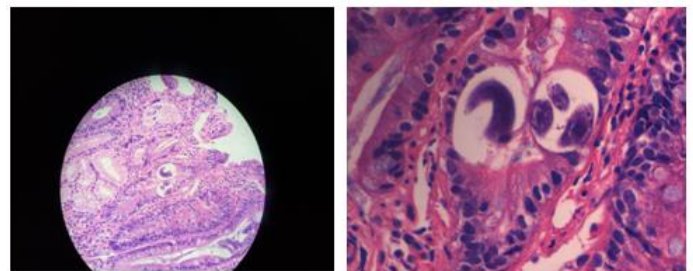


Fig - (a, b): Mucosal erythema with edema and loss of vascularity, Multiple aphthous ulcerations

Clinically the patient presents with, Fever, Abdominal pain, Loose stools, Cough, Wheeze, Eosinophilia, Normocytic, normochromic anemia, skin manifestations larva currens and periumbilical purpura. Direct fecal smears rhabditiform larvae can be seen through agar plate method, Serodiagnosis through ELISA and Duodenal biopsy report proving the presence of organism. This

patient also had ulcerative colitis in colonoscopy and the colonoscopy biopsy confirmed it. Strongyloides colitis can mimic IBD and it can be differentiated histologically. The colonic biopsy showed mucosal edema, crypt formation with inflammatory exudate. Differentiating feature between IBD and strongyloides is that strongyloides has transmucosal granulomatous inflammation which is not present in IBD. Also loss of vascularity is predominant in IBD. IBD involves a larger part of the descending colon and the rectum.

Discussion

The main concern is in a case of IBD whether to start him on steroids or not. Since corticosteroids will worsen his infection causing hyper infection. Use of mesalamine has known to reduce symptoms but not to cause hyper infection. Cyclosporine is a good alternative for corticosteroids therapy. Treatment for *S. stercoralis* inflammation is totally different from that for IBD. Anthelmintic medical aid with ivermectin and withdrawal of immunological disorder therapy are the treatments of alternative for Strongyloides inflammation. In distinction, IBD is treated with corticosteroids, that has been tried to be the leading risk issue for the foremost severe types of Strongyloidiasis. Thus, correct identification of Strongyloides inflammation is prime for the choice of associate applicable treatment. Misdiagnosis of IBD is common because of the similarities in clinical presentation, endoscopy, and microscopic anatomy. Attention to delicate morphologic variations between Strongyloidiasis and IBD is essential for minimizing diagnostic error. This neglected condition needs a high index of suspicion, particularly in patients infected with HTLV-1 or WHO are undergoing treatment with corticosteroids or therapy. Initiation of anthelmintic medical aid for Strongyloides inflammation and

withholding immunological disorder medications are crucial for preventing a fatal outcome during this curable disease.

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