

# Terminal ileum schistosomiasis with perianal fistula mimicking Crohn's disease

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## ABSTRACT

Schistosomiasis is a parasitic disease related to water contact in the agricultural fields, affecting millions of people in developing countries in tropical and subtropical parts of Africa, Asia, and South America. We report a case of a 27-year-old male, with intestinal schistosomiasis associated with perianal fistula mimicking Crohn's disease, where the terminal ileum showed a cobblestone appearance, and histopathological biopsy showed schistosoma granuloma.

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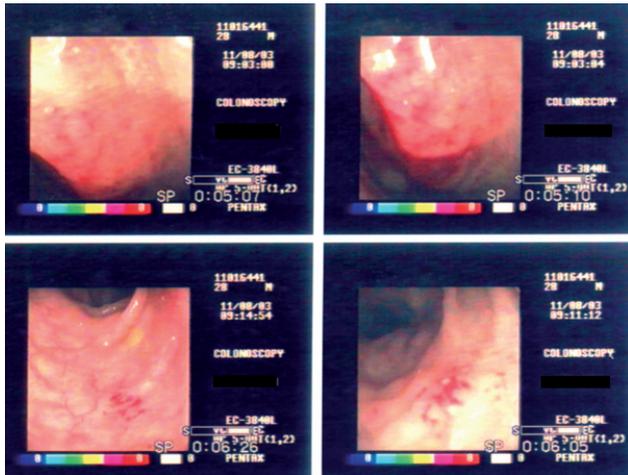
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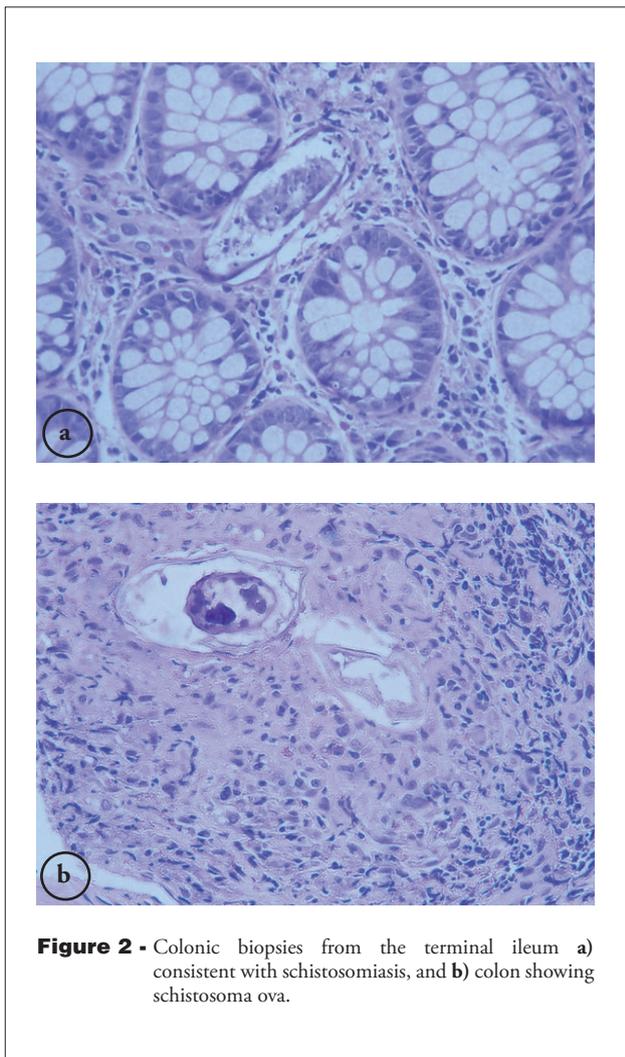
Schistosomiasis is a parasitic disease related to water contact in the agricultural fields, affecting millions of people in developing countries in tropical and subtropical parts of Africa, Asia, and South America. Schistosomiasis is a trematode (blood fluke), where the cercariae penetrate the skin.<sup>1</sup> The liver, colon, urinary bladder, and ureter are the main organs affected, however any organ can be affected, even the skin and brain.<sup>2</sup> The main pathology is due to ova deposition in different organs causing fibrosis.<sup>3</sup> Intestinal schistosomiasis can lead to diarrhea, abdominal pain, bleeding, anemia, morbidities, and may lead to death from bleeding varices.<sup>4,5</sup> The incidence of schistosomiasis has decreased significantly in Brazil, Egypt, and other Middle East countries, due to health education control programs and effective treatment with praziquantel.<sup>1,4,6</sup> On literature research, there is only one report describing the association of fistula in ano with

intestinal schistosomiasis.<sup>7</sup> Intestinal involvement in *Schistosoma mansoni* infection is usually confined to the ileum and colon. Duodenal infestation was diagnosed in a patient with recurrent schistosomiasis despite treatment,<sup>8</sup> and different organs can be involved.<sup>9</sup> We are reporting a patient with schistosomal colonic disease, whose presentation and endoscopic findings were the same as those in Crohn's disease. Thus, schistosomal colonic disease should be considered endoscopically in the differential diagnoses of terminal ileum disease, mimicking Crohn's disease, tuberculosis, lymphoma, or others.

**Case Report.** A 27-year-old male was referred from the primary care clinic for colonoscopy. He was suspected to have Crohn's disease with a history of intermittent bloody diarrhea, perianal discharge, abdominal pain for one year duration, and a 5 kg weight loss in 6 months. A perianal abscess was opened and drained in a private clinic prior to his visit in our clinic. He describes the abdominal pain as dull, diffuse, and radiating all over the abdomen, mostly para-umbilical with on and off diarrhea sometimes containing fresh blood. No history of fever, night sweats or anorexia. The physical examination including cardiovascular system, central nervous system, respiratory system, and abdomen was normal. On rectal examination, it showed a peri-anal fistula at the 9'o-clock position, and the fistula opening at the 3'o-clock position, 5cm from the anal verge, with palpable tract. The full blood count, urea and electrolytes, thyroid function, and liver function tests, were all normal, with C-reactive protein of 5, and erythrocyte sedimentation rate of 4. The tests for urine, and stool for ova, parasite, or both, were negative. The chest x-ray was normal. The upper gastrointestinal endoscopy was normal, and colonoscopy result showed mild inflammation with scattered aphthous ulceration, which was seen along the entire colon with skip areas noted at the recto-sigmoid and descending colon, and transverse colon (**Figure 1**). The terminal ileum showed inflammation with nodularity, with the appearance of cobblestones. The impression was Crohn's disease. Biopsy



**Figure 1** - Colonoscopic view showing mild inflammation, with scattered aphthous ulceration seen along with skip areas and cobblestone-like appearance in the terminal ileum.



**Figure 2** - Colonic biopsies from the terminal ileum a) consistent with schistosomiasis, and b) colon showing schistosoma ova.

was taken from different parts of the colon, and he was started on Pentasa (Mesalazine). The abdominal CT scan showed thickening and irregularity of the terminal ileum suggesting either Crohn's disease, tuberculosis, or lymphoma. The histopathology result of the stomach biopsy showed mild chronic gastritis, with minimal activity. The duodenal biopsy result was not significant. The terminal ileum, left colon, and rectal biopsy showed schistosoma ova with granuloma (**Figures 2a & 2b**). He was started on conservative treatment in the form of praziquantel 40mg/kg stat, and repeated after one week. He was discharged, to be seen in the clinic after one month, to repeat the colonoscopy. On follow-up, he was seen in the clinic after one month, and has no diarrhea. He was requested to repeat colonoscopy after 3 months, unfortunately he failed to come back.

**Discussion.** The clinical presentation of diarrhea, weight loss, perianal fistula with the colonoscopic findings, in this case, was highly suggestive of Crohn's disease. *Schistosoma mansoni* was diagnosed in this patient though the findings in the terminal ileum were suggestive of Crohn's disease. The colonoscopic appearance was studied in 216 patients with schistosomiasis; the mucosa may be different or may look normal, but colonic biopsies might show schistosoma ova or granuloma. In 16 of these 216 patients, the colonoscopic findings were suspected as inflammatory bowel disease.<sup>10</sup> The presence of perianal fistula was suspicious of Crohn's disease rather than schistosomiasis disease. Perianal fistula is an unusual finding with schistosoma, but has been reported previously in chronic schistosomiasis.<sup>7</sup> Unfortunately, our patient was lost to follow-up, however, it would have been interesting after treatment with praziquantel, to see the colon appearance, particularly of the terminal ileum, and to take biopsies. The CT scan of this patient showed thickening and irregularity of terminal ileum suggestive of Crohn's disease, lymphoma or tuberculosis. Previous radiological studies, and manifestations of schistosomiasis do not report such findings.<sup>11</sup>

Schistosomal colonic disease is a major health problem in endemic areas, and if not diagnosed and treated early, might lead to complications such as chronic intestinal schistosomiasis and hepatosplenic schistosomiasis, which have high morbidity and mortality. At present, there are no reports on association between *Schistosoma mansoni* and malignancy,<sup>13</sup> though there have been reported association between bowel malignancy and *Schistosoma japonicum*,<sup>14</sup> and *Schistosoma hematobium* in urinary bladder malignancy.<sup>15</sup> In our patient with *Schistosoma mansoni*, we found no association with malignancy.<sup>9,10,16</sup> Schistosomal colonic disease can present with non specific abdominal symptoms even with distracting colonoscopic views. The colonic biopsies

carry high yield for the diagnosis of schistosomiasis, compared to stool examination.<sup>12</sup> The case presented is similar of Crohn's disease because of the history of diarrhea, weight loss, perianal lesion, and cobblestone appearance in the terminal ileum, besides ulcerations and skip lesions in the other parts of the colon, and CT scan findings, but the terminal ileal and colonic biopsies showed *Schistosoma mansoni* ova.

In conclusion, this presentation is very unusual for schistosomiasis. If no biopsies were taken from this patient he would have been treated as Crohn's disease, as we had started the patient on Pentasa waiting for the colonic biopsy results.

## References

1. Webbe G. Schistosomiasis, some advances. *Br Med J* 1981; 283: 1104-1116.
2. El Gareem AA. Schistosomiasis. *Digestion* 1998; 59: 589-605.
3. el Shiekh Mohamed AR, al Karawi MA, Yasawy MI. Organ involvement in hepato-intestinal schistosomiasis. *Hepatogastroenterology* 1994; 41: 370-376.
4. Barbosa CS, Campozana Gouveia G. [Intestinal schistosomiasis and its control in North-East Brazil]. *Sante* 2000; 10: 137-139. French.
5. Stelma FF, Tallay, Verla P, Nisang M. Morbidity due to heavy *Schistosoma mansoni* infection in a recently established focus in Northern Senegal. *AMJ Trop Med Hyg* 1994; 50: 575-579.
6. Yousef AR, Cannon JM, Al Juburi AZ, Cockett AT. Schistosomiasis in Saudi Arabia, Egypt, and Iraq. *Urology* 1998; 51(5A Suppl): 170-174.
7. Georghiou PR, Tilse MH, McCormack JG, Neely MG. Fistula-in-ano: an unusual presentation of chronic schistosomiasis. *Aust N Z J Surg* 1995; 65: 541-543.
8. Contractor QQ, Benson L, Schulz TB, Contractor TQ, Kasturi N. Duodenal involvement in *Schistosoma mansoni* infection. *Gut* 1988; 29: 1011-1012.
9. Mohammed AE, Al Karawi MA, Yasawi MI. Intestinal and Hepatosplenic schistosomiasis, case series and review of literature. Reference on Crohn's disease colonoscopic findings. *JAMA* 1990; 522; 35-41.
10. Mohamed AR, al Karawi M, Yasawy MI. Schistosomal colonic disease. *Gut* 1990; 31: 439-442.
11. Abd El Bagi ME, Sammak BM, Mohamed AE, Al Karawi MA, Al Shahed M, Al Thagafi MA. Radiological manifestations in gastrointestinal parasite infestation. *Eur Radiol* 2004; 14: 116-131.
12. Yassawy MI, Mohamed AE, Al Karawi MA. Comparison between stool examination, Serology and large bowel Biopsy in diagnosing *Schistosoma mansoni*. *Trop Doct* 1989; 19: 132-134.
13. Dimette RM, Elwi AM, Sproat HF. Relation of schistosomiasis to polyposis and adenocarcinoma of large intestine. *Am J Clin Pathol* 1951; 26: 266-276.
14. Chen MC, Chuang CY, Chang PU, Hu JC. Evaluation of colorectal cancer in schistosomiasis. *Cancer* 1980; 46: 1661-1675.
15. El Bol Kainy MN, Choneium MA, Mansour MA. Carcinoma of the Bilharzial bladder in Egypt. *Br J Urol* 1972; 44: 561-570.
16. Mohammed AE, Al Karawi MA, Koreich OM. Incidence of colorectal cancer and colonic polyps in Saudi patients. *Ann Saudi Med* 1990; 10: 19-21.

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Gul R, Khalid K, Al-Rajhi MF, Bismar HA. Acute small bowel obstruction due to bilharziasis. *Saudi Med J* 2005; 26: 1624-1626.

Khalaf H, El-Meteini M, El-Sefi T, Hamza AF, El-Gazaz G, Saleh SM, Moustafa I, Gad H, Yosry A, El-Hussainy E, Khafaga M, Helmy A. Evolution of living donor liver transplantation in Egypt. *Saudi Med J* 2005; 26: 1394-1397.

Khalaf H, Farag S, El-Hussainy E. Long-term follow-up after liver transplantation in Egyptians transplanted abroad. *Saudi Med J* 2004; 25: 1931-1934.