

## Sigmoid Volvulus and Chronic Colonic Schistosomiasis: Causal or Casual Link

The Editor,

Sir,

Schistosomiasis (Bilharziasis) is the second most common parasitic infection in the world after malaria, caused by trematodes of the genus *Schistosoma*. Three schistosomal species cause most of the human infections: *S mansoni*, *S japonicum* and *S haematobium*.

Intestinal schistosomiasis is classically associated with *S mansoni*, but the other two species can also produce intestinal infections. *S mansoni* is endemic throughout Africa and in many areas of Latin America and the Middle East, particularly Egypt (1, 2). The usual clinical presentations of intestinal schistosomiasis include abdominal pain, diarrhoea, bloody stools and protein loss, and can be a significant cause of upper gastrointestinal bleeding. Herein, we report a rather rare initial presentation of colonic schistosomiasis as sigmoid volvulus (SV). Literature search uncovered only two previously reported cases of SV and associated schistosomiasis (3, 4).

A 29-year old male presented to the emergency department with complaints of abdominal pain and vomiting. Laboratory investigations were significant for mild neutrophilic leucocytosis. Colonoscopy showed features of SV and associated erythematous erosive colonic mucosa. Abdominal imaging studies showed features of large bowel obstruction secondary to SV which led to laparotomy. The resected sigmoid colon measured 21 cm in length with dilated lumen, flattened mucosa and oedematous wall. Histology showed mucosal ulcerations associated with moderate to severe eosinophilia. Schistosomal parasitic eggs were identified within the mucosa, submucosa and muscle layer with surrounding granulomatous reaction [Figs. A, B]. The eggs showed lateral spine and the capsule was well demonstrated with Ziel-Nielson stain [Fig. C]. The mesentery was thickened with thrombosed blood vessels. The diagnosis of sigmoid volvulus and coexistent *S mansoni* infection was made. Subsequent stool examination was negative for schistosoma ova. The patient was treated with praziquantel. The patient gave history of travel to Egypt, an endemic area.

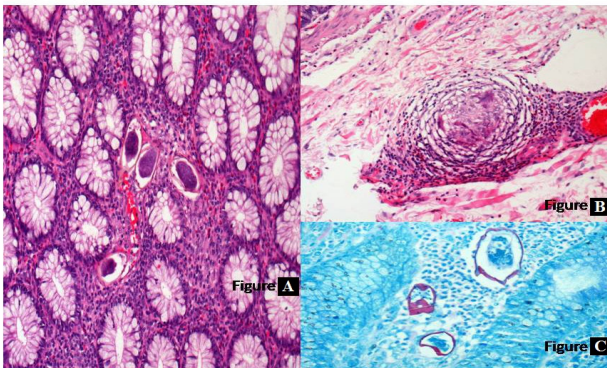


Fig. A: Colonic mucosa with schistosomal eggs (H&E, ×200).

Fig. B: Granulomatous reaction around degenerated schistosomal eggs (H&E, ×200).

Fig. C: Ziel-Nielson stain highlights the capsule of the schistosomal eggs.

Intestinal schistosomiasis mostly affects the left colon and rectum. In the early stages of infection, one sees an acute proctitis and colitis accompanied by oedema and haemorrhage as ova are discharged into the bowel lumen. Gastrointestinal schistosomiasis presents as localized or diffuse mucosal or serosal ulcers, strictures due to extensive granulomatous or fibrous reaction, pericolic masses, polyposis and masses of granulation tissue (1, 2). The disease may grossly mimic Crohn's disease, peritoneal tuberculosis or carcinoma. Schistosomiasis has also been associated with colonic perforation, ischaemic colitis and colorectal cancer.

In this case, the clinical presentation was judged to be an otherwise benign diagnosis of SV but the histology was crucial in diagnosing the underlying and/or coexistent pathology which warranted further treatment. The fibro-inflammatory response in the colonic wall and the mesentery evoked by the schistosomal infection might have triggered the volvulitic episode.

Due to the increasing migrant population and international travel, awareness about the varied and atypical clinical presentations of these treatable infectious pathogens is highly essential for proper patient management.

**Keywords:** Schistosomiasis, sigmoid colon, volvulus

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