

Case Report

Crohn's disease and schistosomiasis: A rare coexistence

N. Viazis¹, J. Vlachogiannakos¹, E. Komninou¹, K. Papaxoinis¹,
D. Georgiadis¹, M. Rodias¹, M.E. Kopaka², D.G. Karamanolis¹

CASE REPORT

According to WHO over 200 million people worldwide suffer from schistosomiasis and the main disease causing species are *Schistosoma haematobium*, *Schistosoma Japonicum* and *Schistosoma mansoni*¹. *S. mansoni* is considered to be endemic in parts of Africa, the Middle East and South America, but is thought to be extremely rare in Greece. Herein we present a case of a patient presenting with a *S. mansoni* infection who was subsequently diagnosed with Crohn's disease.

A 31 year old lady presented with a month long history of fever, which a couple of days before admission to our clinic was followed by the presence of diarrhea (several loose bowel movements per day with no blood). She was feeling unwell; however her general examination was unremarkable. Blood count (including eosinophil count) and liver function tests were normal (Hb:9.7g/dL, WBC:10.900/uL, PLT:297000/uL, Gly:70mg/dL, Urea:14mg/dL, Creatinine:0.48mg/dL, Na:137mmol/L, K:4.86mmol/L, SGOT:21IU/L, SGPT:12IU/L, ALP:87IU/L, γ GT:28IU/L, CRP:0.85mg/dL). She was subjected to colonoscopy, which revealed edema, ulceration and presence of pus and mucus in the left colon (particularly in the descending and sigmoid colon). The appearance was that of an aggressive colitis. At the same time an upper endoscopy and a capsule endoscopy were normal. Meanwhile, during her hospitalization, the patient developed erythe-

ma nodosum and on the basis of the colonoscopy and her clinical presentation she was treated for IBD and corticosteroids were commenced. Following this approach, her fever subsided and the erythema nodosum disappeared; however she continued to manifest diarrhea. At the same time we received the results of her colon biopsies, which showed numerous *S. mansoni* ova in the lamina propria. Praziquantel (40mg/Kg) was administered in three doses at 0-4-8 hours respectively, although it is worth noting that the patient was born and raised in Greece and had never traveled outside the country. Despite the administration of praziquantel, her bowel symptoms were unchanged and repeat colonoscopy with biopsies this time revealed microscopic features of Crohn's disease, while the parasite was not seen at these biopsies. Her symptoms responded to oral sulphasalazine, steroids (with appropriate tapering) and anti-TNF and she remains controlled one year later.

Infection with *Schistosoma mansoni* occurs when the snail intermediate host sheds larvae (cercariae) into fresh water.¹ The cercariae penetrate the skin or mucous membrane of man, who is the definite host. The developing worms enter the general circulation and mature into adult worms in the portal venous system. They then migrate to the inferior mesenteric vein. Eggs are laid in the submucosal veins and may pass through the colonic wall to enter the faeces. The life cycle is completed when human faeces containing ova contaminate water supplies infested with the snail intermediate host.

Symptoms from schistosomiasis vary and are related to the intensity of the infection. Most patients are asymptomatic, others have non specific abdominal pain or diarrhea.^{2,3} Patients with a heavy worm burden may have chronic bloody diarrhea with pus and mucus in the stools. Colonoscopy in such patients may show a swollen granular or hemorrhagic mucosa, which can be mistaken for

¹2nd Department of Gastroenterology, Evangelismos Hospital, Athens – Greece, ²Pathology Department, Evangelismos Hospital, Athens – Greece

Author for correspondence:

Nikos Viazis M.D., 59 Niriidon street, 17561 P. Faliro, Athens Greece, Tel: +306977617000 / +302107201638, Fax: +302107233671, e-mail: Nikos.Viazis@gmail.com

IBD; however schistosomal colitis is histologically distinct form that of IBD, even when ova are absent.

Our patient presented with fever and diarrhea and her primary endoscopic picture was suggestive of IBD. However, her biopsies revealed infection with *s. mansoni*, although Greece is not considered an endemic area for this infection. Despite the fact that appropriate treatment was given⁴, the patient continued to manifest symptoms and subsequent biopsies revealed the presence of Crohn's disease. To our knowledge this is the first report of a coexisting schistosoma infection and Crohn's disease. Since there is literature data suggesting that a parasitic infection, which traditionally induces a T helper 2 (Th2) immune response, protects against a T helper 1 (Th1) inflammation, such as that seen on Crohn's disease, schistosomal infection and Crohn's disease is indeed considered a rare coexistence.

As well as documenting that schistosomal infection and Crohn's disease can coexist, our report reminds us that a *Schistosoma mansoni* infection can rarely occur in humans who have never lived or traveled in an endemic area.

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