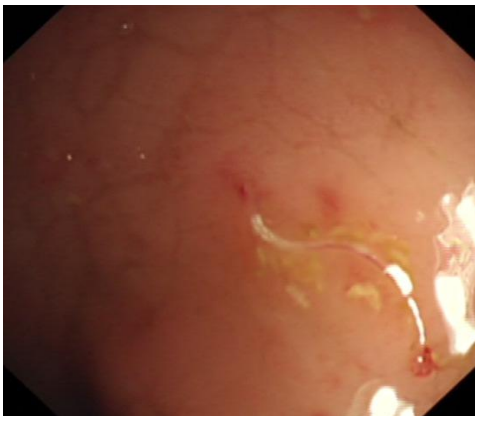
Babu Ivan MANI and Vui Heng CHONG



A 33-year-old man presented to district hospital with complaints of watery stool of one week duration. This was associated with colicky abdominal pain. He continued to have watery diarrhoea, six to seven times a day that persisted for more than 11 days despite receiving a course of antibiotic (Ciprofloxacin). Stool microscopic examination was negative for amoeba, ova, or cyst and stool culture was negative. There was progressive rise in the total white cell count WBC (27 to 36 x $10^{9;}$ Eosinophil counts 60% from 17%). A colonoscopy was done (**Panel:** *click on image to watch video*).

What is the diagnosis?

***Answer**: refer to page 265*

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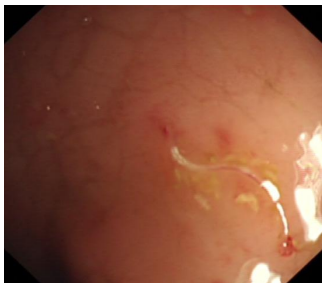
(*Refer to page 251*)

Answer: Colonic hookworm infestation

Endoscopic examination was done and that revealed scattered multiple small ulcers throughout the rectum, sigmoid and descending colon with live wriggling hook attached (*click on image to view the video*). The red linear line at the centre of the word represented the ingested host blood. Sigmoid biopsy showed nonspecific chronic colitis. The patient was treated with three days of Mebendazole. This relieved the diarrhoea and abdominal pain. Blood counts done five weeks after completion of treatment showed resolution of leucocytosis and hyper-eosinophilia.

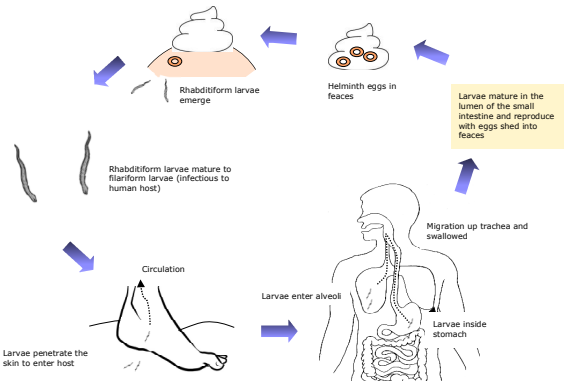


Endoscopic image showing a worm (Click image to watch video)

Hookworm is the second most common helminthic infection in humans, very common in the underdeveloped and impoverished nations. [1] It is a nematode that usually infects the small intestine. Two common species that infect humans are *Ancylostoma Duodenale* and *Necator Americanus*. [1] Adult worms usually live in the small intestinal lumen. Patient may present with symptoms of intestinal inflammation like abdominal pain, and watery diarrhoea though most individuals remain asymptomatic. The adult worms may migrate to the large intestine causing enteritis, hyper-eosinophilia and watery diarrhoea. [1-3]

Hookworm infestation is associated with poor hygiene and walking on bare foot on grounds exposed to excrements. [1] The worm gain entry through the skin and make its way to the lymphatic where it enters the lung and migrate upward to be swallowed into the digestive tract. During this process, there is usually minimal symptoms. In the initial phase of the gastrointestinal tract infestation, the symptoms are usually mild and non specific and chronically, patient manifest with iron deficiency anaemia or hypoproteinaemia. Presentation with acute dysentery or acute diarrhoea have been reported in the literature. [2, 3]

The life cycle of the hook worm is shown below.



Life cycle of hookworm.

REFERENCES

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2: Wang CH, Lee SC, Huang SS, Chang LC. Hookworm infection in a healthy adult that manifested as severe eosinphilia and diarrhea. J Microbiol Immunol Infect. 2011; 44:484-7.

3: Thomas V, Harish K, Tony J, Sunilkumar R, Ramachandran TM, Anitha PM. Colitis due to Ancylostoma duodenale. Indian J Gastroenterol. 2006; 25:210-1.