An unusual cause of melaena in a child

Sanath P Lamabadusuriya¹ and Shehan Perera²

(Index words: Hookworm infection, endoscopic diagnosis)

Case report

A previously healthy and playful 2-year old girl was admitted to Base Hospital, Chilaw with a history of melaena and lethargy for one week.

On admission she was lethargic and very pale with a hepatomegaly of 1 cm. Her haemoglobin was 3.5 g/dl and the stool examination and ultrasound scan of the abdomen were normal. In spite of two blood transfusions she continued to have melaena and remained pale. She was then transferred to Lady Ridgeway Hospital. She gave no history of drug ingestion, or features suggestive of gastritis. She was from a poor socio-economic background without toilet facilities. The entire family used the surrounding scrub jungle for defecation. The children used the same surroundings for play.

Results of investigations were as follows: Hb 7.65 g/dl, stools report – no ova; stool culture – no pathogens isolated; liver function tests – normal; white blood cell count – 13 600/ μ l (eosinophils 13%). She continued to have melaena and the haemoglobin dropped to 3.7 g/dl in spite of frequent transfusions. She was transfused 16 units of blood during a period of 35 days.

Ultrasound scan of the abdomen showed a normal portal vein with no evidence of chronic liver disease. Upper gastrointestinal endoscopy showed no varices and the first part of the duodenum including the stomach was normal; barium meal and follow through was normal up to the distal small intestine. 99 mTc Meckels scan showed no evidence of ectopic gastric mucosa, 99 mTc red blood cell scan showed no evidence of haemorrhage into the gastrointestinal tract and CT scan of abdomen showed a normal small intestine.

As all investigations were normal a repeat upper gastrointestinal endoscopy together with a colonoscopy was done at the Professorial Surgical Unit of the Colombo South Teaching Hospital. The upper gastrointestinal endoscopy showed a large number of worms attached to the second part of the duodenal mucosa. A specimen was taken and these were identified as hookworms (*Necator americanus*). A repeat stool examination at the Department of Parasitology, University of Colombo showed hookworm ova (150 eggs/g). A diagnosis of heavy hookworm infestation was made on the 42nd day of the illness and she was treated with a single dose of 400 mg albendazole. The child showed a dramatic improvement. The melaena ceased, haemoglobin levels remained stable and no further transfusions were required. The entire family was dewormed and the child was discharged on appropriate treatment. Two weeks later the haemoglobin was 8.6 g/dl.

Discussion

Melaena is due to upper gastrointestinal haemorrhage, usually caused by reflux oesophagitis, Mallory-Weiss syndrome, gastric or duodenal ulcers, oesophageal varices, gastric carcinoma or acute gastric erosions. Rare causes include hereditary telangiectasia, pseudoxanthoma elasticum and blood dyscrasias. Hookworm infestation was not listed as a cause of melaena other than a report on a few infants who developed overt gut bleeding and melaena after transplacental infection (1). A literature search on the medline (1990-2001) showed no reports of hookworms being associated with melaena.

In this child the worm load was so great that it caused a massive blood loss giving rise to melaena. *Necator*

¹Senior Professor and ²Registrar, Professorial Paediatric Unit, Lady Ridgeway Hospital for Children, Colombo 8. (Correspondence: SPL, Telephone + 94 1 811486, e-mail: deanmed@hotmail.com. Received 2 November 2002, accepted 6 January 2003).

Case reports

americanus is the hookworm species found in Sri Lanka. The adult worm inhabits the small intestine and attaches to the intestinal mucosa by chitinous plates. By means of lytic enzymes, anticoagulants, and a vigorous pharyngeal pump mechanism blood and tissue fluids are ingested and the bleeding continues at previous attachment sites. Each worm ingests about 0.05 ml of blood daily. In heavy infections approximately 100 ml of blood is lost each day. Diagnosis is by demonstration of hookworm ova in stools. It is useful to estimate the faecal egg count as this provides some measure of the intensity of infestation. The patient may also have an eosinophilia. Treatment with a single dose of albendazole (400 mg) or mebendazole (100 mg bd) for 3 days are both effective (2).

Acknowledgements

The authors are thankful to Dr. Aloka Pathirana, Senior Lecturer in Surgery, University of Sri Jayawardenapura for endoscopic studies, technical staff of the Department of Parasitology, Faculty of Medicine, University of Colombo for the parasitological investigations and Mrs. Hemamali Pathmathilake for secretarial assistance.

References

1. Campbell AG, McIntosh N (eds). Forfar and Arneil's Textbook of Pediatrics. 5th ed. London: Churchill Livingstone, 1998; 1779.
2. Weatherale DJ, Ledingham JGG, Warrel DA (eds). Oxford Textbook of Medicine. 3rd ed. Oxford: Oxford medical publication, 1996; 929-32.