

Image of the month: Target the bugs: *Strongyloides stercoralis* hyperinfection

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ABSTRACT

A 74-year-old woman carrying the human T-lymphotropic virus type-1 (HTLV-1) presented with abdominal pain and vomiting. Computed tomography and microscopic analysis of the gastroduodenal drainage fluid made a diagnosis of paralytic ileus due to *Strongyloides stercoralis* hyperinfection with underlying HTLV-1 infection. Strongyloidiasis should be included in the differential diagnosis for paralytic ileus in patients who have lived in or migrated from the endemic regions.

KEYWORDS: *Strongyloides stercoralis*, hyperinfection, human T-lymphotropic virus type 1, ileus, computed tomography

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Case presentation

A 74-year-old woman presented with abdominal pain, diarrhoea and vomiting for 2 weeks. She had a history of bronchial asthma and her medication included budesonide inhalation solution. Physical examination revealed stable vital signs and leg oedema. Her abdomen was soft, distended and nontender with decreased bowel sounds. Laboratory examination showed white blood cells of $8.1 \times 10^9/L$, C-reactive protein of 2.2 mg/L (normal range <1.4), and albumin of 29 g/L (normal range 41–51). Antibodies to human T-lymphotropic virus type-1 (HTLV-1) were positive. Abdominal contrast-enhanced computed tomography showed mural thickening with ‘target sign’ enhancement of the small intestine (Fig 1). On admission, nasogastric tube drainage was performed, and the microscopic analysis of the gastroduodenal drainage fluid revealed *Strongyloides stercoralis* larvae (Fig 2). A diagnosis of paralytic ileus due to *S stercoralis* hyperinfection with underlying HTLV-1 infection was made. Treatment of oral ivermectin at 200 µg/kg for 7 days was initiated, resulting in successful eradication and prompt clinical improvement.

Discussion

S stercoralis can persist in the intestine for decades and approximately 400 million people are infected worldwide.¹ Immunosuppressive conditions (including ageing, immunosuppressive medication and



Fig 1. Enhanced computed tomography showing mural thickening with ‘target sign’ enhancement of the small intestine and ascites.

co-infection with HTLV-1) can cause life-threatening hyperinfection syndrome, characterised by paralytic ileus and Gram-negative bacteraemia.^{2,3} Co-infection of *S stercoralis* and HTLV-1 affects each



Fig 2. Microscopic imaging of the gastroduodenal drainage fluid revealing *Strongyloides stercoralis* larvae.

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other through altering immunity.³ Strongyloidiasis should be included in the differential diagnosis for paralytic ileus in patients who have lived in or migrated from endemic regions, such as Asia, Africa and South America.

References

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