

# Unexpected cause of iron deficiency detected by capsule endoscopy

Dear Editor,

Flierman *et al.* present a case of ascariasis as an unexpected cause of microcytic anaemia.<sup>1</sup> Although the finding of *Ascaris lumbricoides* by video capsule endoscopy was certainly unexpected, we disagree with the conclusion that the infection with *Ascaris* had caused the iron deficiency. In contrast to some other helminths, *A. lumbricoides* does not feed on blood and does not cause mucosal damage severe enough to result in significant chronic faecal blood loss. The worm infections most commonly associated with iron deficiency anaemia are: hookworm (i.e. *Necator americanus* or *Ancylostoma duodenale*), *Schistosoma mansoni*, and *Trichuris trichiura*.<sup>2</sup> For example, a daily blood loss of 0.25 ml per adult worm of *A. duodenale* has been described. Anaemia is mostly associated with high worm loads and these heavy infections in particular can be readily diagnosed by demonstrating the eggs by microscopic stool examination. Treatment with mebendazole is effective,

not only against ascariasis, but also against hookworm infections and trichuriasis. It would be interesting to know the origin and travel history of the patient and the results of microscopical examination of the stool.

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## REFERENCES

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2. Tolentino K, Friedman JF. An update on anemia in less developed countries. *Am J Trop Med Hyg.* 2007;77:44-51

## RESPONSE TO LETTER TO THE EDITOR

Dear Editor,

We would like to thank Dr. Visser and Dr. Lieshout for their comments. The patient was born in the Dutch Antilles, but had not been there for several years. Her recent travel history was unremarkable. Her stool examination was negative. The suggestion that the anaemia was caused by other worm infections than the observed *Ascaris* could be a possible explanation of the effect of the mebendazole treatment. However, we would like to point out that similar case reports to ours have been reported before in the literature.<sup>1</sup> Furthermore a study in school children in Zanzibar identified the presence of *A. lumbricoides* as an independent explanatory factor of iron deficiency anaemia in a multivariate analysis including the presence of hookworm infections, suggesting that *A. lumbricoides* itself could indeed be the causative factor.<sup>2</sup>

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2. Stoltzfus RJ, Chwaya HM, Tielsch JM, et al. Epidemiology of iron deficiency anemia in Zanzibari schoolchildren: the importance of hookworms. *Am J Clin Nutr.* 1997;65:153-9.