

# Out of Africa: Ascariasis Initially Diagnosed by Computed Tomography

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**A** 36 year old Israeli woman who has been residing in Nigeria for the past 3 years was referred to the emergency room for severe abdominal pain. The patient has had mild pain for months, but the pain increased in intensity before

admission. Ultrasonography revealed a small amount of infrahepatic liquid. She underwent a computed tomography scan of the abdomen, which revealed a well-defined band-shaped filling defect with thread-like shadows caused by the presence of contrast material within the enteric canals of a worm [Figure]. Stool microscopy revealed ova of *Ascaris lumbricoides*. The pain gradually resolved after treatment with albendazole.

Worldwide, *Ascaris lumbricoides* is a common helminthic infection affecting an estimated 25% of the population. Ascariasis is occasionally diagnosed in areas with a more temperate climate, including Israel, but is much more common in tropical regions. Travelers to highly endemic countries, where more than 80% of the population is infected, are at an increased risk of acquiring ascariasis [1-3]. Although most *Ascaris* infections are asymptomatic, serious complications do occur in about 0.1% of patients [4]. Migration of adult worms into the biliary tree, pancreatic duct or appendix occasionally causes biliary colic, cholangitis, cholecystitis, or appendicitis

[5]. High worm load within the small bowel occasionally leads to obstruction, perforation, volvulus, or intussusception [3,4]. Ascariasis is indeed one of the most common causes of surgical admissions in tropical regions and should be considered in returning travelers with acute abdominal pain.

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*Ascaris lumbricoides* within the small bowel



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#### Capsule

#### Peripheral quality control of protein folding

Protein misfolding diseases often lead to the retention and degradation of important proteins within the endoplasmic reticulum (ER). Strategies to reduce the stringency of ER quality control that allow the proteins to carry on through the secretory pathway to reach their destination at the cell surface have shown some promise. Okiyoneda et al. wanted to understand how, even if a protein reaches its destination it may still be subjected to a second level of quality control and cleared from the plasma membrane. Using functional

small-interfering RNA screens in cells expressing the common cystic fibrosis mutation F508CFTR, the authors identified a pair of chaperones that promoted clearance of defective proteins from the plasma membrane. This peripheral quality control step will also need to be overcome to increase the effectiveness of strategies to overcome protein misfolding disorders.

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