

## Ascariasis Clinical Features and Management



PLAY PICMONIC

### Early Clinical Manifestations

#### Cough

##### Coffee-coughing at start of race

In patients with ascariasis infection who go on to develop symptoms, the exact clinical manifestations will depend largely on how late or early they present in the course of the infection. Early manifestations of ascariasis are typically localized to the respiratory tract, as larvae are migrating through the blood stream to the lungs, where they will subsequently be coughed up and swallowed back into the gastrointestinal tract. Of note, patients with respiratory symptoms due to ascariasis will typically have normal findings on chest radiograph.

#### Eosinophilic Pneumonitis (Löffler Syndrome)

##### Eosinophil-eagle with eosinophil-lungs-on-fire wearing loafers

The early pulmonary manifestations of ascariasis are characterized by a pneumonitis with eosinophilic reaction to larvae infiltrating the lungs. This pulmonary manifestation is commonly referred to as Loeffler or Löffler syndrome. Of note, several other parasites such as *Strongyloides*, *lumbrioides*, and *Necator americanus* can exhibit pulmonary involvement leading to Löffler's syndrome.

### Late Clinical Manifestations

#### GI Upset

##### Upset GI-guy in later leg of race

Patients with ascariasis who present later in their disease course will typically complain of primarily gastrointestinal symptoms. Most commonly, patients will complain of some degree of gastrointestinal upset, such as abdominal pain, nausea, or vomiting.

#### Bowel or Biliary Obstruction

##### Dilated-bowel bill-duck obstructing the race track

Patients with symptomatic ascariasis infection who present late in the disease course may develop a bowel or biliary obstruction due to adult worms inhabiting the gastrointestinal or biliary tracts. Bowel obstruction may manifest clinically as bloating and distension, constipation, and vomiting with oral food intake. To develop a bowel obstruction, patients typically must have a significant infection burden of  $\geq 60$  worms.

#### Worms in Stool

##### Worm on stool

One of the most specific and unmistakable findings in late-stage ascariasis infection is the passage of visible adult worms in the stool. This may not necessarily be seen in all patients however, therefore its absence does not rule out ascariasis.

### Diagnosis

#### Stool Ova and Parasite Studies

##### Doctor examining Stool-egg and Worm

In patients suspected of having ascariasis due to a combination of clinical symptoms and relevant epidemiologic exposure, diagnosis is established via stool examination for ova or adult worms. Of note, ova will not appear in the stool until after approximately 40 days of infection, therefore diagnosis cannot

typically be definitively established during the early respiratory phase of the infection. Stool ova and parasite examination for ascaris involves specific staining techniques that are beyond the scope of what you will likely need to know.

## Management

### Albendazole

[Abe-Bond](#)

Treatment of ascariasis consists of administration of anti-parasitic agents. The most preferred agent is albendazole, as it has been shown to be effective in resolving nearly all ascaris infections with a single oral dose. Albendazole acts by blocking microtubule polymerization in the parasite, leading to impaired egg production and degenerative alterations within the worm's gastrointestinal tract.

### Pyrantel Pamoate In Pregnancy

[Pregnant Pirate Pomeranian](#)

Given potential teratogenicity of albendazole and related medications, women in the first trimester of pregnancy should be treated with pyrantel pamoate, which is effective in resolving approximately 90 percent of infections. Pyrantel pamoate acts by causing neuromuscular blockade and paralysis of adult worms.