# An unexpected cause of proximal small intestinal obstruction

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## Case description

A 63-year-old caucasian male with history of tonsil cancer, under induction chemotherapy, reported food intolerance and vomiting with duration of one month. Symptoms had increased over the last days and were associated with a weight loss of 10 Kg during the past three months. The patient lived all of is life in an urban environment. General physical examination revealed cachexia and dehydration. Gastrointestinal symptoms persisted despite intravenous pantoprazole, prokinetic drugs and nasogastric tube insertion. On investigation, patient presented normocytic and normochromic anemia (9.2 g/dL), lymphocytosis (11.78 x $10^9$/L) with neutrophilia (70.7%) and eosinophilia (7.7%), hypoalbuminemia (2.8 g/dL) and elevated C-reactive protein (25.5 mg/dL).

Upper endoscopy revealed deformation of bulb and second part of the duodenum with mucosal edema, superficial ulceration and friability (Figure 1a). Biopsies were taken from the bulb and second portion of the duodenum. Computer tomography demonstrated gastric distention, duodenal wall thickening and lumen narrowing in the second and third portion of the duodenum (Figure 2). These findings were indicative of a functionally relevant duodenum stenosis. Histopathologic evaluation of biopsy specimens from the duodenum revealed moderate accumulation of eosinophilic granulocytes and nematode larvae within mucosal crypts (Figure 1b).

What is the diagnosis?

The diagnosis of strongyloidiasis was made. Stool parasitologist evaluation confirmed the diagnosis. Treatment with ivermectin was initiated with improvement of gastrointestinal symptoms.

Strongyloidiasis is a helmitic infection caused by *strongyloides stercoralis*, a parasite endemic in tropical and subtropical regions, with few cases reported in Europe (1). Immunosuppression might lead to a rare condition known as strongyloidiasis hyperinfection, with exuberant gastrointestinal symptoms as well as respiratory or dermatologic symptoms (2). Cytotoxic drugs are a risk factor for this condition (2). Duodenal obstruction is an extremely rare complication of strongyloidiasis with few cases reported in the literature (3).

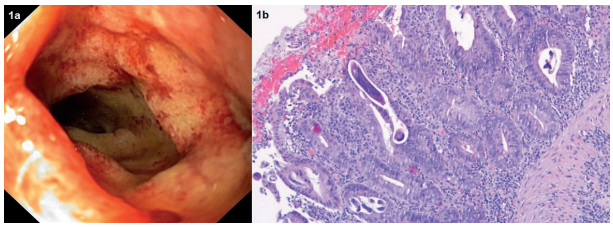


Figure 1. — Panel A: Upper endoscopy revealed deformation of bulb and second part of the duodenum; mucosa presented exuberant edema, superficial ulceration and friability. Panel 2: Histology revealed eosinophilic and granulocytic infiltration of lamina propria, mucosal ulceration and nematode larvae within mucosal crypts.

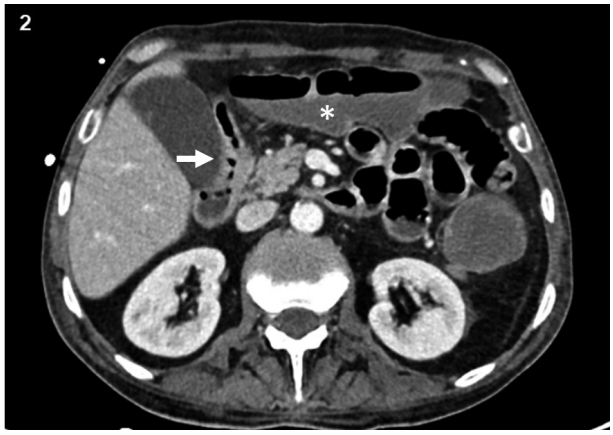


Figure 2. — Computer tomography revealing gastric distention (asterisk) and duodenal stenosis (arrow).

The diagnosis of this condition is challenging and misdiagnosis are frequent. Endoscopic and histologic findings played a critical role in the diagnosis of this case.

## Author contributions

Joel Ferreira-Silva and Rui Morais drafted the manuscript and performed literature search. Francisco Moreira provided the histological image. Guilherme

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Macedo critically revised the manuscript and is the article guarantor.

**Informed consent**

Obtained for this case report.

**Financial disclosure**

None to report.

**Conflicts of interest**

None to report.

**Article guarantor**

Guilherme Macedo MD PhD.

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