

Acute abdominal pain caused by accidental ingestion of *Latoia* species larva: a case report

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Abstract

We report the clinical and endoscopic manifestations in a patient with acute abdominal pain caused by the accidental ingestion of a *Latoia consocia* (Walker) larva. Clinical data including the patient's medical history, and the results of physical examination, laboratory tests, and gastroscopy were collected. Based on this rare case, we discuss the clinical characteristics and manifestations, diagnostic methods, and principles of this disease.

Keywords

Lepidoptirism, *Latoia consocia* (Walker), abdominal pain, gastroscopy, larva, accidental ingestion

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Introduction

The larvae of *Latoia consocia* (Walker) possess bristles that can cause an allergic reaction, pain, and mucosal swelling of the digestive tract, resulting in symptoms such as abdominal pain and vomiting. However, the condition is rare and most doctors lack the experience required for its diagnosis and management, frequently leading to misdiagnosis.

Case report

A 23-year-old woman was admitted to hospital with a 1-day history of acute

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abdominal pain. She developed nausea and vomited bile-stained fluid on several occasions. She did not complain of hematemesis, melena, or diarrhea. She reported eating vegetables and fruit the day before admission. She found half a caterpillar in her salad, and assumed that she had eaten the other half. The caterpillar was identified by a professional as *L. consocia* (Walker).¹ The results of the patient's physical examination were as follows: temperature, 37.0°C; pulse rate, 92 beats per minute; respiration rate, 18 breaths per minute; and blood pressure, 125/70 mmHg. The patient's consciousness was clear but her mental status was poor. She had no icteric sclera, and her abdomen was plain and soft. She had moderate epigastric tenderness with no rebound tenderness. Her ascites sign was negative. B-mode ultrasound examination showed that her liver, gall bladder, spleen, and pancreas were normal. Routine blood tests showed the following: white blood cells 4.0×10^9 /L, neutrophils 64.1%, lymphocytes 25.0%, eosinophils 1.2%, basophil granulocytes 0.6%, red blood cells 3.81×10^{12} /L, hemoglobin 113 g/L, hematocrit 33%, and

platelets 147×10^9 /L. Endoscopic findings showed foreign bodies resembling mollusk stings penetrating into the gastric wall in the sinus ventriculi area, with some injected into the muscle layer, resulting in hyperemia and swelling of the mucosa (Figure 1). We removed the stings using biopsy forceps, which took approximately 50 minutes. We considered that the patient's abdominal pain had been due to inflammation and an allergic reaction in the stomach caused by bristles from the *L. consocia* (Walker) larva.

Given that removal of the bristles might damage the adjacent stomach mucosa, we administered the high-dose proton pump inhibitor (PPI) omeprazole to protect the stomach after the operation. We also administered oral chlorpheniramine maleate (0.4 mg three times a day) to treat the allergic reaction. The patient's abdominal pain resolved soon after the procedure.

The patient provided written informed consent for publication of the data in this study. This was a retrospective case report, and institutional review board approval was not required. The patient provided

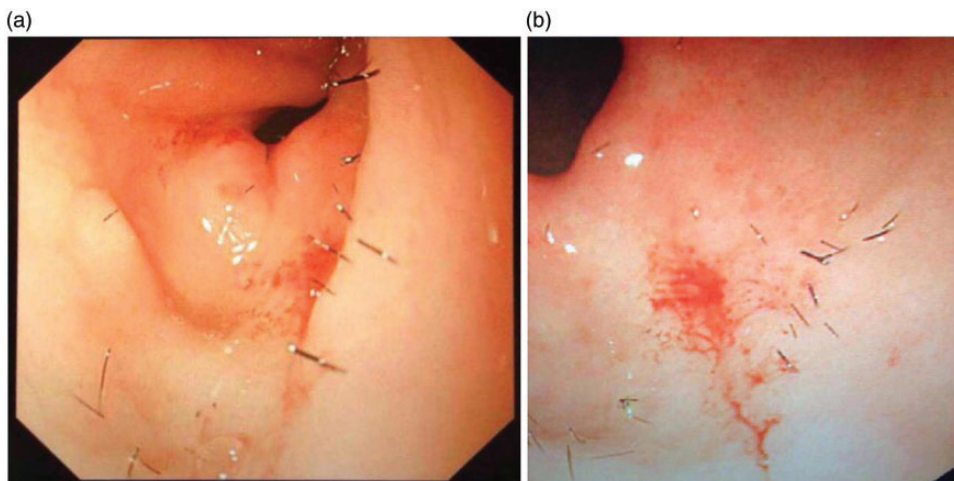


Figure 1. Endoscopic finding of *Latoia consocia* Walker in stomach sinus. Bodies resembling mollusk stings had penetrated into the gastric wall in the stomach sinus, with some injected into the muscle layer, causing hyperemia and mucosal swelling.

written informed consent for publication of the data in this study.

Discussion

The moth *L. consocia* (Walker), family Eucleidae (also known as Limacodidae), belongs to the order Lepidoptera, which is the second largest order in the phylum Arthropoda, and which is widespread throughout China and the world. The larvae (caterpillars) of *L. consocia* (Walker) possess numerous bristles that are toxic to humans, resulting in a variety of symptoms such as abdominal pain, diarrhea, and allergic reactions (Figure 2). *L. consocia* (Walker) is also regarded as a pest species, because it eats the leaves of crops and vegetables. The bristles of *L. consocia* (Walker) caterpillars contain acid. Humans often encounter the caterpillars during summer and autumn, resulting in swelling and allergic skin reactions, which



Figure 2. *Latoia consocia* (Walker) larva showing bristles, which are toxic to humans.

in turn cause itching, and possibly fever or even infectious shock, due to the effects of the toxins.

Treatment involves removing the bristles as soon as possible and administering anti-itch therapy. In the current case, the patient accidentally swallowed part of a *L. consocia* (Walker) caterpillar because her salad had not been thoroughly washed. The caterpillar's bristles then became injected into the mucosal wall of the stomach as a result of the continuous peristalsis of the stomach. Endoscopic examination clearly showed that the bristles were associated with acute inflammation and allergic reaction in the stomach. We removed all the bristles using biopsy forceps, and administered high-dose PPIs to protect the stomach, as well as chlorpheniramine to treat the allergic reaction, resulting in prompt alleviation of the patient's abdominal pain. In this case, we only found bristles in the sinus ventriculi and not in the esophagus, duodenum, or upper part of the stomach. We considered that this was probably because the food passed through the esophagus quickly, but stayed in the sinus ventriculi for a relatively long time (4–6 hours).² The diameter of the pylorus is small and contracts regularly, which could explain why no bristles were located in the duodenum. In addition, the gastric juice is acidic, which might stimulate the caterpillar to wriggle, thus facilitating injection of the bristles into the stomach wall.^{3,4} In the current case, we removed all the bristles and administered anti-allergy therapy, resulting in rapid alleviation of the patient's abdominal pain. We therefore speculated that such cases should be treated by prompt removal of bristles and use of anti-allergy treatment.

We searched the Social Sciences Citation Index, Science Citation Index, and Engineering Index and found no similar cases. This condition is thus very rare, and this case provides important information to raise doctors' awareness of this condition.

Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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