Gastric anisakidosis: unfavorable taste of Sushi

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Article type: Clinical image

Received: May 4, 2019.

Accepted: May 17, 2019.

Published online: May 21, 2019.

ISSN: 1897-9483
A 57-year-old man presented with severe epigastric pain and nausea 5 hours after eating “sushi” meal. He reported he had had raw mackerels. Vital signs were stable and abdominal examination revealed abdominal tenderness without rebound in the epigastrium. He underwent endoscopy with a suspicion of anisakidosis, disclosing a white worm penetrating the mucosa of the gastric upper body (FIGURE 1A). Closer observation revealed that a white worm was biting the mucosa and moving slowly (FIGURE 1B). The worm was removed by the biopsy forceps, after which his symptoms resolved completely. Microscopic examination confirmed an *Anisakis* larva (FIGURE 1C).

Anisakidosis is a parasitic infectious disease transmitted to humans through raw, pickled
or undercooked fish and seafood containing larvae of the nematode of the family Anisakidae [1]. These larvae can be found in salmon, cod, herring, and mackerel. Most cases occurred in Japan where “Sushi”, the traditional habit of eating raw fish, is quite popular. As cultural changes of eating undercooked marine diet have become more popular worldwide, patients with anisakidosis have been increasing globally, even in coastal areas of Europe [2-4]. Symptoms of anisakidosis include abdominal pain, nausea and diarrhea. This infection can lead to massive eosinophilic infiltration and formation of granulomas. Re-infection sometimes leads to systemic allergic reactions, including urticarial and anaphylaxis [1, 3]. A history of recent consumption of raw fish followed by the acute onset of above symptoms provides important clues for the diagnosis [4]. In most acute cases, endoscopic bioptic removal of the larva provides a definitive diagnosis. The larvae may cause chronic submucosal granulomatous nodules in the stomach, which require endoscopic submucosal resection for both diagnosis and treatment [5]. Serological examination for anti-A. simplex immunoglobulin E can be helpful for the diagnosis of intestinal, ectopic and allergic disease. Although rare, intestinal and/or ectopic cases may require surgical removal [4]. Given the growing risk of anisakidosis, the keys to prophylaxis include adequately freezing or cooking fish.

References
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Figure 1A. Endoscopy disclosing a white worm penetrating the mucosa of the gastric upper body. The surrounding surface was erythematous and edematous.
Figure 1B. Closer view of the *Anisakis* larva biting the mucosa (arrow).

Figure 1C. Microscopic picture of a removed *Anisakis* larva.