

Clinical diagnosis

Case 359

2. infectious small bowel disease including Anisakis disease

【Discussion】

Anisakis life cycle originally begins and ends in sea. Eggs are excreted from large fish or sea mammals followed by floating as one of planktons, being repeatedly eaten by fish, and finally reaching sea mammals. Eaten by human via squids or blue-colored fish is beyond its expectation. Once Anisakis enters in human, Anisakis attempt to invade to gastrointestinal mural. They get attack from human immune cells, inducing to die within a few days. When Anisakis survive longer, it will induce formation of eosinophilic granuloma, a few weeks later (1, 2).

Anisakis infection is getting to be recognized in 1960ies, especially Japan, Spain, and Holland but rarely in USA (1-3). At present, it occurs around 1000 cases in Japan (1, 2).

Clinically, Anisakis is categorized in four types: gastric, intestinal, extra digestive, and allergic. Abdominal pain, nausea, vomiting are most-encountered symptoms in gastric and intestinal types: gastric type emerges in average 5.2 h (0.5-24) while intestinal type 39 h (12-120) (4). Perforation and ileus (passage disorder) can be found in Intestinal Anisakis. Eosinophilic granuloma is formed in greater omentum, mesentery, and abdominal wall, extra digestive type. Repeated Anisakis infection induce Ig-E mediated systemic allergic reaction, causing dyspnea, hypo-blood-pressure and consciousness disorder.

Clinical diagnosis of Anisakis infection is made by food history of raw fish, Sashimi, and symptoms of abdominal pain. Endoscopic finding of Anisakis worm of around 2 cm is definitive for its diagnosis. CT findings for Anisakis might not be always characteristic, edematous mural thickening of stomach, intestine, and misty mesentery like infectious gastric bowel disease. However, it causes to induce ileus and perforation, further, mesentery edema and ascites (5-7). Especially, combination of mural thickening causing ileus with ascites remind typical CT findings for Anisakis disease.

The prevention of Anisakis is not to eat raw squids or raw blue-colored meat fish. Fish cooked at 60 centigrade degrees for more than one hour or frozen at minus 20 centigrade degrees or lower for more than 24 hours are available to eat for safety (4).

【Summary】

We presented a twenty-seven-year-old female for strong abdominal pain two days before eating row fish of bonito and mackerel. Small intestine edematous mural thickening, ileus and ascites are found on abdomen CT. It is borne in mind that gastric Anisakis occurs within 24 hours while intestinal Anisakis occurs 1 to 5 days after eating squeeze and blue-meat fish such as bonito and mackerel. CT findings for Anisakis are swollen mural of stomach and intestine with ascites, possibly inducing perforation and ileus.

【References】

1. Takabayashi, T. et al. Anisakiasis presenting to the ED: clinical manifestations, time course, hematologic tests, computed tomographic findings, and treatment. *Am J Emerg Med*, 32 (2014), pp. 1485-1489
2. Shimamura, N. et al. Common symptoms from an uncommon infection: gastrointestinal anisakiasis. *Can J Gastroenterol Hepatol*, 2016 (2016),
3. Van Thiel, F.C. et al. A nematode parasitic to herring, causing acute abdominal syndromes in man. *Trop Geog Med*, 12 (1960), pp. 97-113
4. 国立感染症研究所寄生動物部 杉山 広 森嶋康之
5. Shirahama, T., et al. Intestinal anisakiasis: US in diagnosis. *Radiology*, 185 (1992), pp. 789-793
6. Shibata E, et al. CT findings of gastric and intestinal anisakiasis *Abdom Imaging*. 2014; 39(2): 257–261
7. Lalchandani UR, et al. Imaging in gastric anisakiasis. *Clin Imaging*, 50 (2018), pp. 286-288

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