

A Case of Fish Bone Penetration out of the Ileum

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(Received April 3, Revised May 14, 1996)

Abstract A 58-year-old woman visited to our department because of lower abdominal pain, which had continued for about one week. At that time, physical examination revealed no remarkable findings except for induration of the anterior wall of the rectum. Therefore, the patient was scheduled for further examination as an outpatient. However, at that night, lower abdominal pain increased. The patient was admitted to our department on the next day and diagnosed with acute panperitonitis due to perforation of the appendix. At laparotomy, penetration by a fish bone 25 mm in length was recognized and partial resection of the ileum and peritoneal drainage were performed. Although recrudescence of Douglas' abscess occurred, this responded to conservative therapy. The patient was discharged and remained well.

Key words: Fish bone, Penetration, Ileum, Douglas' abscess

Introduction

Fish bone perforation or penetration of the intestinal tract is extremely rare, and 384 cases have been reported in Japan¹⁾. This report describes the case of fish bone penetration out of the ileum.

Case Report

A 58-year-old woman visited to our department because of lower abdominal pain which had continued for about one week. Her physical examination revealed no fever or abdominal tenderness, but induration of the anterior wall of the rectum was palpable on rectal examination. An abdominal plain radiograph revealed no remarkable findings except for increasing air in small intestine on

the pelvis, in particular, no radiopaque material suggestive of a fish bone was demonstrated (Fig. 1). There was no leukocytosis. The patient was scheduled for further examination as an outpatient. However, at that night lower abdominal pain increased and she admitted to our hospital on the next day. Her physical examination revealed remarkable direct tenderness with muscle guarding and rebound tenderness in the lower abdomen and marked tenderness in the pelvic area on the rectal examination. She was febrile, 38.2°C. In the laboratory testing WBC and CRP were 13,000 cell/ μ l and 14.00 mg/dl, respectively. A chest radiograph revealed no free air, and an abdominal plain radiograph showed no remarkable change compared with that of the previous day. A preoperative diagnosis of acute panper-



Fig. 1 An abdominal plain radiograph at the second day of our department showed increasing air in small intestine of pelvis, in particular, no radiopaque material suggestive of a fish bone was demonstrated.



Fig. 2 Intraoperative findings showed penetration by a fish bone of 25 mm in length.

itonitis due to perforation of the appendix was made and the patient was undergone immediate surgical exploration. The abdomen was open through a lower right pararectus incision. Inside the peritoneal cavity, puriform ascites was noted. The appendix was grossly intact. Pelvic peritonitis was encountered involving about 30 cm of the terminal ileum. And penetration by a fish bone of 25 mm in length was observed about

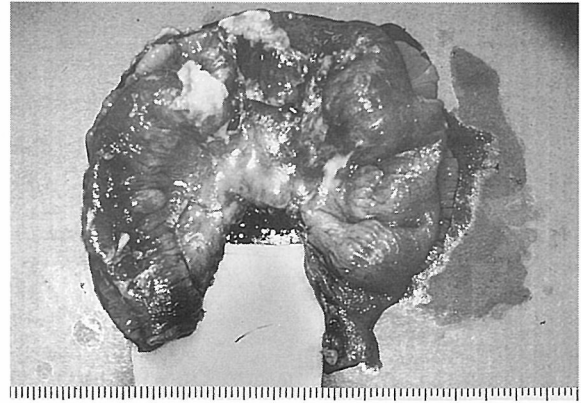


Fig. 3 Resected specimen and a penetrated fish bone.

45 cm from the ileocecal valve (Fig. 2). Partial resection of the ileum and peritoneal drainage were performed and bowel continuity was re-established by end-to-end anastomosis (Fig. 3). The patient's postoperative course was quite uneventful until three weeks after the operation, when recrudescence of Douglas' abscess occurred. However, this responded to conservative therapy. The patient was discharged on the 50th hospital day and she has remained well. We questioned her about a history of fish bone ingestion after the operation. Apparently, she had unknowingly swallowed it.

Discussion

Although ingestion of foreign bodies is by no means uncommon, most of them pass through the gastrointestinal tract within a period of seven days²⁾. It was estimated that although 10 to 20% of ingested foreign bodies would fail to pass through the entire gastrointestinal tract, less than 1% cause perforation or penetration³⁾. In McManus's series of 95 cases of perforation or penetration of the gastrointestinal tract by ingested foreign bodies, 26 cases (27%) involved fish bone⁴⁾. On the other hand, since the Japanese frequently consume fish, the incidence of ingestion of fish bone is high⁵⁾. In Japan, 384 cases of intestinal perforation or penetration due to fish bone have been reported prior to the present case. Ando reported that the sites of perforation or penetration, in descending

order frequency, were (1) anus (31.3%) (2) ileum (9.6%) (3) transverse colon (8.8%) (4) sigmoid colon (6.3%) (5) esophagus (5.8%) (6) rectum (3.3%) (7) cecum (2.5%) (8) descending colon (2.1%)⁶⁾. In this series, the clinical presentations were (1) intraabdominal abscess or granuloma (30.4%) (2) perineal or periproctal abscess (16.7%) (3) periproctitis (13.8%) (4) peritonitis (9.2%) (5) penetration to other organ (6.3%) (6) abdominal wall abscess or granuloma (5.8%)⁶⁾. Operations were performed in 99.1% of all the patients⁶⁾. However, the preoperative diagnosis was difficult. They were often mistakenly diagnosed as (1) malignant tumor (15.9%) (2) inflammatory tumor (13.2%) (3) appendicitis (11.9%). The accurate preoperative diagnosis was made in only 4.6% of these cases⁴⁾. Some of the difficulty was caused by a lack of recognition of fish bone ingestion. The etiological pattern of ingestion of foreign bodies, including fish bone, is varied. Carelessness is the most frequent cause, particularly in children. Other causes included poor vision, mental infirmity, rapid eating, drug addiction, a dare, absent-mindedness and use of dentures³⁾. The wearing of dentures may cause a lack of normal palatal and gingival sensation, permitting accidental bone ingestion⁷⁾. In our case, as the patient did not fit one of the above etiological patterns of ingestion of foreign bodies and lacked cognition of fish bone ingestion, an accurate preoperative diagnosis was not made. In only two cases reported in Japan, fish bone ingestion has been detected on abdominal plain radiograph⁸⁾⁹⁾. In our case, it did not show the fish bone. On the other hand, abdominal computed tomography is of proven benefit in the diagnosis of fish bone penetration or perforation¹⁰⁾. Regrettably, computed tomography was not obtained in our case. We stress that it is worthwhile considering computed tomography in patients with unexplained peritonitis and intraabdominal abscess, in addition to taking a detailed history, especially with respect to meals.

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