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Radiological Focal Enteritis as a Presentation of Accidental Fishbone Ingestion

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Abstract

Accidental Foreign body ingestion is not an uncommon medical problem. Of all foreign bodies ingested, Fishbones are the most common, yet most pass the alimentary tract unnoticed. Gastrointestinal complications, such as hollow viscus perforation may develop in less than 1% of cases. Diagnosis is usually challenging and depends on a combination of detailed history and physical examination, along with radiological findings. Two cases of non-radio-opaque fishbone ingestion with localized small bowel perforation presented radiologically as focal enteritis are reported here.

Keywords

Fishbone Ingestion; Localized Peritonitis; Focal Enteritis

Introduction

Accidental Foreign Bodies (FBs) ingestion is a well-known, highly challenging medical problem. Most FBs pass unnoticed through the alimentary tract within 1 week [1]. Only small portion (<1%) of these bodies may cause Gastrointestinal (GI) complications, such as bowel perforation, intestinal obstruction, GI haemorrhage or abscess formation [2,3]. The

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cricopharyngeal sphincter of the esophagus is the most common GI site (75%) where most FBs are impacted [4]. Intra-abdominally, the most common sites of FBs impaction and complications are the less mobile segments of the bowel with acute angulation such as the ileum and the rectosigmoid junction [5]. Of all accidentally ingested FBs, fish bones are the most common with cases ranging between 63-84% [6,7].

Diagnosis of said surgical problems depends on a combination of detailed history, physical examination as well as radiological findings. Imaging studies include abdominal plain radiography and abdominopelvic Computed Tomography (CT) scan. Plain radiography has a low sensitivity and high rates of false negative findings (47%). Findings usually depend on the size and the radio-opacity of the fish bone [8,9]. On the other hand, abdominopelvic CT scan, which is regarded as the gold standard radiological study, has a higher sensitivity in detecting accidentally ingested FBs [4]. Findings on CT imaging are diverse and include localized fat stranding, localized bowel wall thickening, localized pneumoperitoneum and in some cases a hyper dense linear FB is demonstrated [5,10].

Herein, we describe two patients who presented with focal enteritis secondary to accidentally ingested fishbone.

Case 1

A 55-year-old male patient presented to our emergency department complaining of lower abdominal pain of 3 days' duration. The pain was accompanied by fever of 38°C. The patient denied recent accidental foreign body ingestion. His past surgical history includes laparoscopic single anastomosis gastric bypass due to morbid obesity.

Upon his admission, his vital signs were within normal limits. Abdominal examination revealed soft abdomen with localized tenderness in the lower abdomen. Complete blood count showed WBCs count of 12k. Liver and Kidney function tests were within normal limits. Abdominal X-ray was normal. Abdominal US showed cholelithiasis with no signs of cholecystitis, and thickening of bowel wall segment in left-mid abdomen. Abdominal CT scan revealed thickening of short segment of the ileum along with localized fat stranding with no signs of pneumoperitoneum (Fig. 1).

Due to these findings the patient underwent an exploratory laparoscopy which revealed a hyperaemic segment of small bowel (ileum) covered with a fibrin (Fig. 2), two parallel perforation sites of 2 mm due to a stuck 3 cm fish bone (Fig. 3) were found. An En block resection of the affected small bowel segment along with primary anastomosis was contemplated. His post-operative course was uneventful and the patient was discharged home on post-operative day 3. Histopathological report findings were positive for acute inflammation of the small bowel.

Figure 1: Abomino-Pelvic CT scan showing thickening of short segment of the ileum along (arrow) with localized fat stranding.

Figure 2: On exploratory laparoscopy, a short segment of small bowel with hyperemia covered with fibrin was noticed.

Figure 3: Two parallel perforation sites of 2 mm due to a stuck 3 cm fish bone were found.

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Case 2

A 67-year-old male patient who presented to our emergency department complaining of abdominal pain of 4 days' duration along with constipation. His past surgical history includes laparoscopic cholecystectomy due to cholelithiasis.

His vital signs upon his admission were within normal limits. His physical examination revealed soft abdomen with localized left abdominal tenderness. Complete blood count, liver and kidney tests were within normal limits. Abdominal X-ray was normal. Abdominal CT scan revealed thickening of a small bowel segment along with localized fat stranding, a findings compatible with focal enteritis.

The patient underwent an exploratory laparoscopy, during which a hyperaemic small bowel segment was identified; it was covered with a fibrin layer and pus (Fig. 4). An En block resection of the affected bowel was performed along with primary anastomosis. The resected bowel was opened and a small fish bone was demonstrated, stuck in the bowel wall causing inflammatory reaction and micro perforation (Fig. 5). His post-operative course was uneventful and he was discharged on post-operative-day 6.

Figure 4: During diagnostic Laparoscopy, a hyperaemic small bowel segment covered by fibrin was identified.

Figure 5: Upon opening the resected specimen, a small fish bone was demonstrated, stuck in the bowel wall causing inflammatory reaction and micro perforation.

Conclusion

Accidental fishbone ingestion is an uncommon surgical problem, yet highly challenging for the treating physician. High index of suspicion is warranted for correct diagnosis, which depends on a combination of detailed history and physical exam as well as radiological findings. Radiological focal segmental enteritis in patients with suitable anamnesis should encourage surgical exploration by means of diagnostic laparoscopy.

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