Case report

A rare case of anterior abdominal wall abscess due to transmigrated fish bone from transverse colon

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TITLE OF CASE

Transmigration of fish bone to the anterior abdominal wall after perforating transverse colon is a rare and unique condition in particular resulting in anterior abdominal wall abscess.

INTRODUCTION

This report presents a case of a 42 years old Caucasian male, presented to the Accident and Emergency department with upper abdominal pain and sepsis for three weeks. Computed Tomography showed a sealed perforation of the transverse colon with 10x5 cm abscess adjacent to the colonic bowel containing a fish bone. This was a delayed presentation which required emergency laparotomy due to abscess formation. Therefore, we reviewed the literature and summarized our unique case presentation.

BACKGROUND

Presentation of ingested foreign bodies causing Gastrointestinal tract perforation in general population is not common, however can occur relatively more frequently in adults in cases of pre- existing internal hernia or Meckel's diverticulum. According to the available literature more than 75% of swallowed foreign bodies get impacted at the cricopharyngeal sphincter of the esophagus, and those successfully pass this sphincter and reach the stomach 90% of them successfully pass through the intestine, with only few remaining can cause impaction and potentially resulting in severe complications [1]. There was a case reported of a patient with advanced gastric cancer with oesophageal stenosis, where a 13-cm-long artificial oesophageal stent which passed through whole gastrointestinal tract without causing any perforation or impaction[2]. Therefore a case of a small fish bone causing bowel perforation is probably a rare occurrence in an otherwise healthy individual. Those patients having existing small bowel disease are at higher risk of perforation or if the impaction is at a site of acute angulation such as the areas of junction of the parts of the tract including ileocecal and recto- sigmoid areas [3-5]. Thus the presented case appears to be rare.

CASE PRESENTATION

A 42-year-old Lithuanian, Caucasian male presented to our Accident and Emergency department with a three-week history of upper abdominal pain. His symptoms got worst during the last week. The patient was otherwise fit and well and denied any significant past medical history or abdominal procedures. He remembered losing his lower denture one month back and was concerned. On examination, he was flushed and in moderate pain. His temperature was 38.1°C and his heart rate was 103 beats per minute. His blood pressure was 138/98 mmHg, his oxygen saturation was 95% on room air. His abdomen was generally soft but there was a palpable lump in the area above and to the left of the umbilicus.

INVESTIGATIONS

His laboratory tests showed a white blood cell count of $14.6x10^9$ and his C-reactive protein was 213 mg/L. His abdominal x-ray was unremarkable. A computed tomography of the abdomen was performed. A large, 9x6 cm, hypo dense lesion was noticed arising from the anterior abdominal wall just cranial to the umbilicus was seen. Significant inflammatory changes in the surrounding tissues and a linear foreign body were noticed within this lesion (Figure 1). These features were suggestive of an abdominal wall abscess which was extending deeper into the peritoneal cavity. It was in close contact with the transverse colon, but there was no evidence of perforation or fistula formation (Figure 2).

TREATMENT

The patient was admitted and consented for an open drainage and an exploratory laparotomy. The operating findings were as follows; a 10x5 cm abscess cavity was seen just below the anterior abdominal wall containing a long fish bone which was removed. The transverse colon was inspected and there were nosigns of perforation or fistula formation. The abscess was drained, and the peritoneal cavity was washed with saline. The abdominal wall was closed with a loop PDS1 en masse closure. A Redivac drain, size 10Fr, was placed in the abscess cavity. The skin was stapled. Co-amoxiclav (1.2g/8 hourly) and metronidazole (500mg/8 hourly) were given intravenously for five days.

FOLLOW-UP AND OUTCOME

He made an uneventful recovery. His drain was removed on second post-operative day and the patients was discharged back home on day five. The patient was followed up in clinic for a period of six months. The wound healed without any complications.

DISCUSSION

In the accident and emergency department presentation of the Ingested foreign body is not infrequent clinical presentation though more commonly seen in children, but it rarely presents with perforation of the GI wall [1], traversing through fat and then causing abscess in the anterior

abdominal wall is even rarer. Commonly the foreign bodies get impacted at the narrow parts of the bowel or the angulations [2, 3]. There are some reports in the literature suggesting perforations through weakened walls such as the areas with Meckel's diverticulum [4]. Perforation of the colon seen at the recto-sigmoid, however other than the recto-sigmoid junction are so infrequent, that only a limited number of cases have been reported till date [3,5]. Furthermore the presence of the abscess is extremely rare. The abdominal abscess in the presented case was located in front of the transverse colon. Perforation of the small intestine could be a possibility; due to the reason that foreign body, perforation

of the large intestine tends to present with longer clinical duration as compared to the perforation in the jejunum or ileum [3]. In this case, we speculated perforation of the large intestine as the most likely site and the fish bone could have perforated the transverse colon due to movements of the colon (both propulsive and churning). The other reason for considering this possibility was the shape of the fish bone, it sharp and thin enough that the perforation site spontaneously without causing any major trouble to the gut wall. The abscess in this case was later developed as foreign body reaction of the body which took some time to develop, allowing the patient to remain asymptomatic without any significant clinical deterioration for one month.

LEARNING POINTS/TAKE HOME MESSAGES

1. Elective drainage under imaging (ultrasound/CT) along with the use of antibiotics could be an option for cases.
2. Following the standard management protocol our patient underwent drainage without any bowel resection.
3. Patient has rapid uneventful recovery.

PATIENT'S PERSPECTIVE

I thought initially that it was a lost denture but was relieved after surgery and came for follow up till 6 months and everything thankfully got better.

Figure 1: Sagittal view showing fish bone and site of abscess.
Figure 2: Coronal view showing site of anterior abdominal wall abscess.

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