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Case Report

Bowel perforation caused by swallowed chicken bones – a case series

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INTRODUCTION,

Most foreign bodies pass through the gastrointestinal tract without any consequence. A very small percentage perforate the bowel, leading to acute abdomen and requiring surgical intervention. In most cases, the cause is discovered peroperatively. Foreign bodies such as dentures, fish bones, chicken bones, toothpicks and cocktail sticks have been known to cause bowel perforation. Three cases of bowel perforation caused by swallowed chicken bones within a period of one year are presented.

CASE 1

A 59 year old woman was admitted with a painful irreducible incisional hernia. There was a past history of left hemicolectomy for a diverticular stricture, hysterectomy and bilateral salpingo-oophorectomy, hypothyroidism, chronic obstructive pulmonary disease, hypertension, depression and morbid obesity. Examination revealed a tender, erythematous and irreducible large incisional hernia. It was felt that this was a strangulated incisional hernia. At operation, the hernial sac contained small bowel that had been perforated due to a chicken bone. A small bowel resection was performed with end to end anastomosis and the incisional hernia was repaired. The patient made an uncomplicated recovery (fig 1).

CASE 2

A 46 year old man was admitted as an emergency with a 12 hour history of severe colicky abdominal pain and vomiting which had become constant and aggravated by coughing. There was a past medical history of diverticular disease, chronic constipation and peptic ulcer disease. On examination there was generalised abdominal tenderness and guarding with rebound tenderness in the right iliac fossa. There was an associated leucocytosis (13,000/mm^3) and raised inflammatory markers (CRP 22mg/L). Erect chest X-ray showed free subdiaphragmatic air. A laparotomy revealed a perforation of the sigmoid colon due to a chicken bone in a diverticulum. The chicken bone was removed and the sigmoid colon was repaired. The patient made an uneventful recovery.

CASE 3

A 38 year old man with a previous end-colostomy for faecal incontinence (secondary to cauda equina syndrome) presented as an emergency with a six day history of fever, decreased stoma output and a painful parastomal swelling. On examination he was obese, pyrexic (40 ^{0}C), tachycardia and had generalised abdominal tenderness and cellulitis over a large irreducible parastomal hernia. He was thought to have a strangulated parastomal hernia and underwent emergency laparotomy. At operation he was found to have a parastomal abscess secondary to a colonic perforation within the hernia caused by a chicken bone. The stoma was revised and the parastomal hernia repaired. The patient made a full recovery.

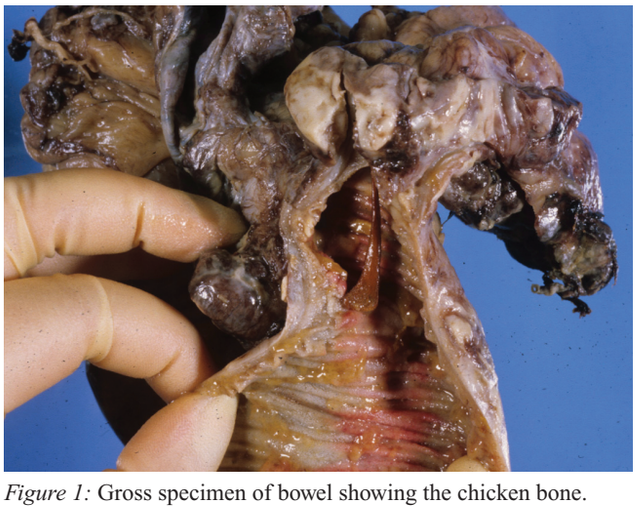

Figure 1: Gross specimen of bowel showing the chicken bone.

DISCUSSION

There are more than 300 cases[1] of bowel perforation caused by foreign bodies reported in the literature. Fish bones, chicken bones and dentures are the commonest objects followed by toothpicks and cocktail sticks.[2-11] The majority of patients do not recall ingesting the foreign body, it being discovered either on investigation (abdominal X-ray or CT scan), or during operation. The greater risk is at extremes of age,[1] in those wearing dentures (dentures cover the most tactile area of the palate and the foreign body goes unnoticed) or in patients with previous bowel pathology (diverticular disease, intestinal stricture). Alcoholics and psychiatric patients are also at increased risk. The clinical presentation may include frank peritonitis, localised abscess formation, enterovesical fistula, intestinal obstruction and intestinal hemorrhage.[1,9]

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Abdominal radiographs are rarely helpful in making a diagnosis preoperatively, however CT scan of the abdomen is considered the most useful imaging to detect foreign bodies or complications arising from them. The most common site of perforation is the terminal ileum and colon, although an increased incidence of perforation has been reported in association with Meckel's diverticulum, the appendix, and diverticular disease.[12-16] Perforation commonly occurs at the point of acute angulation and narrowing. Treatment usually involves resection of the bowel, although occasionally repair has been described.[1,13]

Two of the three cases presented in this report presented as an incarcerated hernia (one incisional and one parastomal) with perforation of the incarcerated bowel by a chicken bone. The third case presented with peritonitis. All three patients had a predisposing condition (hernia or diverticular disease). None wore dentures, and all were grossly obese. Overeating, rapid eating, or voracious appetite may be contributory factors towards ingestion of chicken bones.

CONCLUSION

Perforation of the bowel in a hernia due to an ingested foreign body may mimic strangulation. Diners should be careful when eating poultry or game and exercise due care.

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