Ingested fishbone mimicking a gastric submucosal tumour

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Date accepted for publication 19 April 2007

Abstract

Gastric complications following unintentional foreign body ingestion are extremely rare. We report the case of a 48-year-old lady who presented with a right upper quadrant mass and was diagnosed with a likely submucosal tumour of the stomach. After surgical resection she was found to have an impacted fishbone mimicking a gastric tumour.

Keywords

Fishbone; stomach; tumour; impaction.

Case report

A 48-year-old lady presented with a 2-week history of right upper quadrant pain and vomiting. The pain had developed gradually over a 2-week period and was associated with a 4-kg weight loss. Past medical history included hypertension and a lower segment caesarean section. On examination, the patient was pyrexic, tachycardic, and there was a tender right upper quadrant mass. Blood tests revealed raised inflammatory markers, but no evidence of anaemia. An impression of acute cholecystitis was made and an ultrasound arranged. This revealed a thin walled gallbladder containing two small calculi and normal biliary tree. In addition, there was thickening of the posterior wall of the distal stomach. The symptoms settled with conservative management including a course of antibiotics, and the patient was discharged.

A follow up upper gastrointestinal (GI) endoscopy and computed tomography (CT) scan were arranged. Endoscopy revealed a smooth round 5-cm submucosal antral mass without any obvious mucosal abnormality suggestive of a submucosal tumour. Biopsies of the lesion were inconclusive, revealing mild inflammatory changes. CT scan confirmed the presence of a mass in the distal stomach with flecks of calcification (Fig. 1). There was stranding in the surrounding retroperitoneal fat but with a definite plane between the lesion and the pancreas. After discussion in the upper GI cancer multidisciplinary team meeting, the likely diagnosis of a gastric intestinal stromal tumour (GIST) was made. In view of the size and location of the lesion, the patient went on to have an uneventful distal gastrectomy. Histology of the resected specimen showed that the suspected tumour was an inflammatory mass surrounding an impacted fishbone and that the fishbone had been retrieved.
Discussion

Unintentional, unconscious foreign bodies ingested in adults are usually dietary. Nearly two-thirds of foreign bodies are fish bones but other examples include chicken bones, shells and toothpicks. Unintentional ingestion is more frequent in denture wearers, which may relate to desensitisation of the soft palate. In the aerodigestive tract, impaction is common at or above the cricopharyngeus where removal by endoscopy is usually effective. If impaction does not occur in the upper gastrointestinal tract, a majority of foreign bodies pass asymptotically within a week. Perforation is a rare complication but can occur in both the upper and lower gastrointestinal tract. Likely sites of perforation include the oesophagus, ileocaecum and rectosigmoid. Often, there is nothing in the history to suggest ingestion of a foreign body, as in this case, and symptoms vary according to level of impaction or perforation. Reported complications of perforation include mediastinitis, pneumothorax, aortic injury, cardiac tamponade, hepatic abscess formation, appendicitis, Meckel's diverticulitis, peritonitis and perianal sepsis.

Plain radiographs are usually unhelpful with a sensitivity of 32% for fish bones, which varies according to species. CT scan is preferred and will usually demonstrate a linear calcified lesion, which if initially missed, can be seen in retrospect. Acute perforations usually require emergency surgery when the diagnosis becomes apparent. Rarely, perforation occurs in the stomach where a thicker gut wall and proximity of omentum may seal the perforation. A case of fish bone perforation mimicking pancreatic carcinoma has recently been reported. In addition, gastric and duodenal perforation may result in rarely reported cases of foreign body-induced hepatic abscess formation. However, we are not aware of any previous report of fishbone impaction mimicking a gastric tumour. In this case the presumptive diagnosis of submucosal tumour was made on the basis of the endoscopic appearance and computerised tomography. The absence of a mucosal lesion may indicate the ingestion occurred some time ago, however the history was acute and there was no prior recollection of ingestion of a foreign body. Carcinoid tumours and GISTs may both exhibit flecks of calcification on radiology. The former was considered the more likely diagnosis due to the endoscopic appearance of a submucosal lesion. Although endoscopic ultrasound is a valuable further investigation for GISTs, surgical resection is advocated for lesions greater than 2 cm and tumours greater than 4 cm are particularly associated with malignancy. The failure to diagnose the localised gastric impaction in this case may relate to a low index of suspicion. Nevertheless, retrospective review of the CT scan revealed a linear pattern of calcification consistent with a fishbone. In addition, acute presentation with pyrexia, mass and tenderness in the right upper quadrant was indicative of an inflammatory process and may suggest to the physician a diagnosis other than a gastric tumour. However, like gastric tumours, most complications following foreign body impaction will require surgery at some stage, even many years after ingestion has occurred.

Fig. 1. Axial CT images demonstrating a mass in the posterior aspect of the distal stomach, with retroperitoneal fat stranding but a clear plane between mass and pancreas. In the image on the right, two linear calcified areas are shown within the mass, which after distal gastrectomy and histological analysis were found to be fish bones within a surrounding inflammatory mass.
Complications following fishbone impaction can occur anywhere along the gastrointestinal tract but gastric complications are extremely rare. This is the first published report of an ingested foreign body mimicking an intramural gastric tumour. Further reports maybe required to justify fishbone perforation being considered a rare cause of a gastric mass.

References