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GASTROINTESTINAL OBSTRUCTION FROM PHYTOBEZOAR IN CHILDHOOD: REPORT OF TWO CASES

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GASTROINTESTINAL OBSTRUCTION FROM PHYTOBEZOAR IN CHILDHOOD: REPORT OF TWO CASES

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SUMMARY

This is a report of two children aged twenty seven months and six years respectively presenting with gastrointestinal obstruction from phytobezoar. In the 27-month old child, laparotomy and gastrotomy was performed to evacuate the bezoar. However, death occurred from hypokalaemia. The six-year old child had a sacro-abdomino-perineal pull through for anorectal malformation previously and the bezoar lodged just above the neoanus. Neoanal dilatation allowed removal of the bezoar and relief of the obstruction. There has been no recurrence. The literature on bezoar is briefly reviewed.

INTRODUCTION

Bezoar is the ingestion of materials other than food(1). In children it may be due to pica or mental retardation(2). Trichobezoar is the most commonly reported form of bezoar in children(3-5) and phytobezoar, though not uncommon, is less frequently reported. This is a report of phytobezoar causing gastrointestinal obstruction in two children.

CASE REPORT

Case 1: A 27-month old boy presented with a two-day history of progressive upper abdominal distension associated with vomiting, retching and constipation, but no fever. Prior to onset of symptoms the child had ingested an unknown quantity of locust beans when left unattended.

Physical examination showed severe dehydration and irritability. Heart rate was 122 beats per minute and respiratory rate 38 cycles per minute. The chest was normal on auscultation. The abdomen was full and moved with respiration. There was a firm, non-tender, mobile mass in the epigastrium, extending to the umbilicus and bowel sounds were absent. The rectum was empty at digital examination. A plain abdominal radiograph showed a large gastric fundic shadow. Serum electrolyte analysis showed hyponatraemia, hypokalaemia and hypochloaemia and bicarbonate of 16mmol/l. Electrolyte and fluid deficits were corrected. Nasogastric tube suction drained only air but no liquid gastric content. Initial observation for four hours yielded no improvement. At laparotomy; the stomach was distended with multiple pellet-like structures, but no similar materials were felt in the duodenum, small or large intestines. Via an anterior gastrotomy, a large volume (500mls size) of locust beans were evacuated from the stomach and the wound closed. Postoperatively, rehydration and nasogastric tube suction were continued. The patient, however, continued to deteriorate and died after 24 hours.

Case 2: A 6-year old boy presented with constipation, abdominal distension and vomiting for three days. The child had

a sacro-abdomino-perineal pull through for high anorectal malformation previously and was normal and growing well. No history of ingestion of any foreign bodies was obtained. There was no history of similar symptoms in the past. Physical examination showed dehydration and no fever. The abdomen was distended but non-tender and indentable masses were palpable on the left side. Rectal examination showed neoanal stenosis and a hard faecal mass in the rectum.

The child was resuscitated and had neoanal dilatation under general anaesthesia. A large seed of a local plant was found impacted just above the anal verge and was removed; large quantities of faeces were also evacuated. Enema washout was subsequently performed and the rectum emptied. The child did well and was discharged after 5 days on regular digital anal dilatation. There has been no recurrence.

DISCUSSION

Bezoar in children has been variously reported to be caused by hair(3-5), plant materials and less frequently, chewing gum(1), medications(6), tissue paper(7), milk curd and stones(8). In adults, bezoars are commonly the after-math of gastric surgery or diabetic gastroparesis(2,9). In children, they may be due to mental retardation or emotional stress but at other times no precipitating factors can be found(2,5), but one report(10) has noted that bezoars may form behind congenital bands, stenotic segments or adhesions. In the present report, bezoar was not attributable to any precipitating cause in one patient and formed behind stenotic bowel in another.

Bezoars frequently present with unexplained abdominal mass, abdominal pain and intermittent vomiting and anaemia may be a feature(10-12). Occasionally phytobezoar may cause gastrointestinal obstruction(13) as in this report. Other complications such as ulceration, haemorrhage and perforation may occur(12). The diagnosis of bezoar may be obvious from the history as in one patient in this report, but frequently, investigations may be

necessary to establish a diagnosis. Upper gastrointestinal series(4) may show the intragastric space-occupying lesion as a stippled shadow. Computed tomography scans could establish the diagnosis(4,14) in unsuspected cases and upper gastrointestinal endoscopy(14) may be useful. When only the intestine is involved, diagnosis may rarely be made at laparotomy for intestinal obstruction.

Several treatment options for bezoars have been reported, particularly in trichobezoar and phytobezoar. Expectant management for phytobezoar may be successful but should be abandoned if there is no progress to avoid complication. An initial expectant management was unsuccessful in the patient in whom it was tried in this report, due possibly to the bulk of swallowed seeds. Instillation of digestive enzymes such as papain(10) may be effective. Fragmentation of the bezoar with a lithotripter at endoscopy has been used to achieve clearance(3) and gastrographin instillation by a nasogastric tube has been successful for treatment of tissue paper bezoar in one report(7). In complicated cases with gastrointestinal obstruction or perforation, laparotomy and gastrotomy or enterotomy is necessary(12) for evacuation of the bezoar. One patient in this report required a gastrotomy but manual per-rectal evacuation was possible in the other because the bezoar was in the rectum. Recently, successful removal of trichobezoar by laparoscopy has been reported in a child(4). In the Rapunzel syndrome, where the bezoar extends beyond the ileocaecal valve(6,11), surgery may be the best approach.

Mortality may occur from bezoar, particularly in small children(6). In the present report, the 27-month old child died. Treatment should, therefore, be prompt to avoid morbidity and mortality. It is important that any

underlying or precipitating cause (mental, psychiatric, emotional or pathologic) be treated to avoid recurrence.

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