CLINICAL IMAGES

Trichobezoar causing small-bowel obstruction

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Bezoars are concretions of foreign materials in the stomach, small intestine or bowel of people or animals that impair gastrointestinal motility or cause intestinal obstruction.[1]

Case report

An 8-year-old girl presented with colicky abdominal pain of 7 days' duration and diarrhoea of 3 days' duration. The pain increased in severity, became localised in the right iliac fossa and was associated with nausea, vomiting and constipation. Previous attacks of similar pain had resolved with antispasmodics. The family said that the girl had pulled out and ingested her hair since she was 2 years old.

On examination the abdomen was found to be slightly distended with right-sided tenderness maximally in the right iliac fossa. Rebound tenderness was positive and a vague ill-defined mass was palpable at the right iliac fossa. Bowel sounds were hyperactive. Rectal examination revealed an empty rectum.

Radiographs of the abdomen showed multiple air-fluid levels with distended small-bowel loops. Ultrasound examination confirmed an ill-defined mass in the right iliac fossa with distended bowel loops containing gas.

Exploration of the abdomen revealed a normal appendix, collapsed terminal ileum and distension of the proximal small-bowel loops with two masses identified causing the small-bowel obstruction. The ileum was opened and two masses of trichobezoar removed from the last 60 cm of the terminal ileum (Figs 1 and 2). The patient recovered fully.

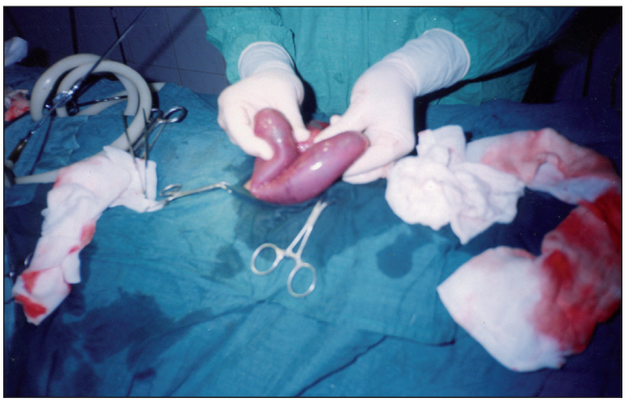

Fig. 1. Two masses of bezoars causing dilatation of the terminal ileum.

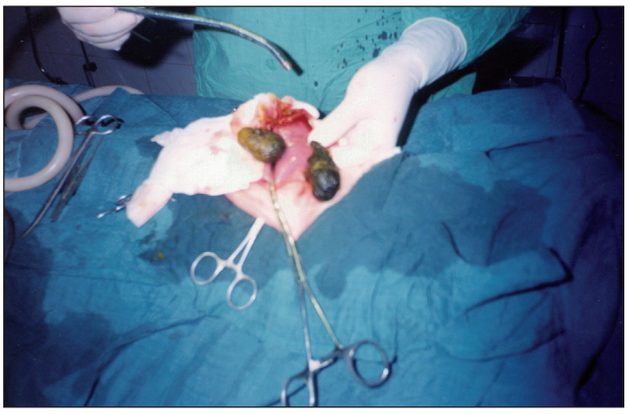

Fig. 2. The trichobezoars extracted from the terminal ileum.

Discussion

Historically the kings of ancient Persia were often targets of poisoning. It was therefore their practice to place a calculus from the intestinal tract of the Persian mountain goat at the bottom of their wine cups, attributing magical protective power to it and believing that the porous structure absorbed poisons. It was called *padzahr*, the Persian word for anti-poisoning. The derived word 'bezoar' is still used to designate large, unpleasant gastrointestinal concretions.

Several components may be found in bezoars. Trichobezoars are an infrequent form of bezoar formed from ingested hair. Lactobezoars are compact masses of undigested milk concretions located within the gastrointestinal tract; they are most frequently found in infants and can cause gastric outlet obstruction. Phytobezoars are firm masses of undigested fruit or vegetable fibre, which can cause gastric or small-bowel obstruction.[2] Predisposing factors to bezoars, in addition to dietary behaviour, include previous gastric surgery, particularly

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partial gastrectomy or truncal vagotomy with pyloroplasty.[3] In adults, bezoars are most frequently encountered after gastric operations. In children they are associated with pica, mental retardation, psychiatric disorder[4] and coeliac disease.

Trichobezoars are usually found in the stomach but may also be found in the duodenum, ileum, jejunum, colon or Meckel's diverticulum.[5] They can be extremely large, cause a wide variety of symptoms[6] and can be fatal.

Patients with bezoars may present with gastrointestinal obstruction that may involve any part of the bowel. In childhood, undiagnosed gastric bezoars may result in serious complications.[7] The history of foreign body ingestion, especially in children and mentally impaired patients, is important.

Ultrasonography and computed tomography (CT) are reliable methods for diagnosing gastrointestinal tract bezoars.

Trichobezoars occur almost exclusively in females and in 80% of cases the patient has a psychiatric disorder. Apart from obstruction, trichobezoars may also cause ulceration with haematemesis, perforation or peritonitis.[8]

Management of trichobezoars depends largely on the presentation of the patient. Conservative treatment may be applied provided that there is no sign of an acute abdomen. Surgical intervention should be reserved for those who have acute abdominal conditions or large bezoars. Endoscopy has a high failure rate and is associated with significant complications.[9]

Recurrent bezoars have also been reported, especially in women.

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