A shaggy dog story? A trichobezoar presenting with gastrointestinal perforation

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Trichobezoars are gastrointestinal masses formed from accumulations of ingested hair. Although well described in the literature (DeBakey and Ochsner, 1938, 1939) they occur rarely. As complications carry a mortality of up to 50% accurate recognition is vital, requiring a high degree of suspicion. We describe a trichobezoar presenting with gastric perforation, the diagnosis being unsuspected before radiological investigation.

DISCUSSION

This case resulted in an unexpected and rare diagnosis. Trichobezoars grow slowly over many years and can, as in this case, form a cast in the shape of the stomach. The hair eaten may be the patients own but may also originate from other sources, e.g. blankets and carpets, animals or dolls.

Trichobezoars are often associated with trichotillomania (the compulsive pulling of hair) and emotional disturbance or mental retardation. In their classic review of the world literature in 1938 DeBakey and Ochsner found 172 cases of trichobezoar. Of these 90% were diagnosed in females with a peak incidence between 10 and 19 years of age. The lack of symptoms was surprising in this case considering the size of the mass. Typically there may be

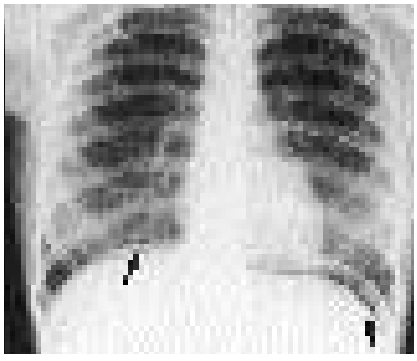

Figure 1. Erect chest X-ray showing free air under both hemi-diaphragms.

CASE REPORT

A 12-year-old Caucasian girl was admitted urgently with a 2-week history of intermittent left upper quadrant pain. The pain had worsened, radiated to the left shoulder blade and was eased with ibuprofen. There were no other associated symptoms and no history of trauma. A similar episode a year before had resolved spontaneously after several days.

On examination she looked well but was pyrexial (temperature 37.7°C). There was a firm, smooth, tender mass extending from the epigastrium to the umbilicus which was not indentable. There was no crepitus, bowel sounds were normal and there were no signs of peritonism.

There was a mild neutrophil leucocytosis but a full blood count and electrolytes were otherwise unremarkable. A chest radiograph suggested free gas under both hemi-diaphragms (*Figure 1*) with a large central soft tissue mass on the plain abdominal radiograph (*Figure 2*).

On ultrasound a gas-filled viscus obscured the epigastrium. Gastrografin swallow characterized this as a dilated stomach with a large granular filling defect completely filling the body and antrum (*Figure 3*). There was no obvious ulceration and no gastrografin leak into the peritoneum. These appearances were highly suggestive of a gastric bezoar.

A more detailed dietary history helped to elucidate the nature of the bezoar. Until 2 years previously the family had kept a German shepherd dog and the patient had eaten its hair for most of her childhood. There were no other unusual dietary habits or behavioural problems.

Laparotomy and gastrotomy of the dilated stomach delivered a large trichobezoar, cast in the shape of the stomach (*Figure 4*). There was a 2 cm sealed perforation of benign appearance on the upper greater curve of the stomach, consistent with a pressure ulcer. The patient made an uneventful postoperative recovery.

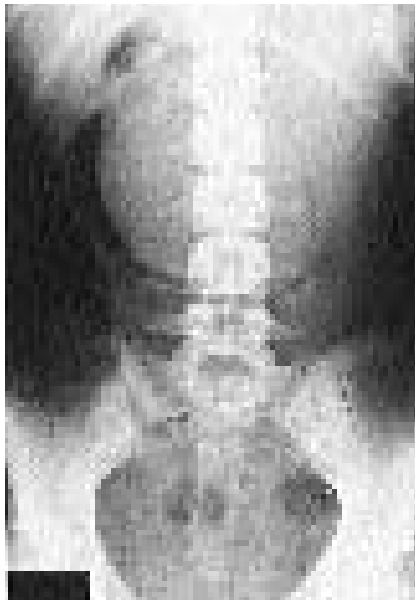

Figure 2. Plain abdominal X-ray showing a large, central soft tissue mass.

Figure 3. Gastrografin swallow showing a dilated stomach with a large granular filling defect.

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accompanying symptoms of halitosis, vomiting, anorexia, abdominal distension and weight loss. In some cases extension into the small intestine may cause intestinal obstruction, obstructive jaundice and pancreatitis. Bezoars may be multiple, an important consideration during surgery (Rees, 1984).

Trichobezoars are often palpable as mobile firm epigastric masses (DeBakey and Ochsner, 1938, 1939) and may therefore be confused with intra-abdominal malignancies. Suggestive features on examination of the mass include indentibility (Lamerton, 1984) and crepitus, while alopecia may point to the diagnosis. The typical texture of the soft tissue mass on plain X-ray initially suggested the correct diagnosis here, and was confirmed by the upper gastrointestinal contrast studies (Margulis and Barhenne, 1967).

Trichophagia has been suggested to represent a form of pica (McGehee and Buchanan, 1980) and underlying iron deficiency should be excluded. It should be noted that very specific questioning was required to elucidate the nature of the bezoar.

Figure 4. The trichobezoar.

CONCLUSIONS

The diagnosis of trichobezoar should be considered in the differential diagnosis of a gastrointestinal mass, and a history of trichophagia should be specifically sought. The clinical suspicion may be confirmed radiologically and at laparotomy. The need for psychiatric follow-up should be considered, although this is not always required. HM

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DeBakey M, Ochsner A (1938) Bezoars and concretions: a comprehensive review of the literature with an analysis of 303 collected cases and presentation of 8 additional cases. *Surgery* **4:** 934–63

DeBakey M, Ochsner A (1939) Bezoars and concretions: a comprehensive review of the literature with an analysis of 303 collected cases and presentation of 8 additional cases. *Surgery* **5:** 132–60

Lamerton AJ (1984) Trichobezoar: two case reports — a new physical sign. *Am J Gastroenterol* **79:** 354–6

Margulis AR, Barhenne HJ (1967) *Alimentary Tract Roentgenology.* Vol 1. CV Mosby Company, St Louis

McGehee Jr FT, Buchanan GR (1980) Trichophagia and trichobezoar: etiologic role of iron deficiency. *J Paediatric* **97:** 946–8

Rees M (1984) Intersussception caused by multiple trichobezoars: a surgical trap for the unwary. *Br J Surg* **71:** 721

IN THE PUBLIC'S VIEW...

Breaking the loyalty code

A *Panorama* (BBC1) about mobile phones, an *Equinox* (Channel 4) about breast implants: May 24 produced a rich vein of evidence for medical doom-mongers and those who watch these programmes. My mind was elsewhere — with Radio 4's *Thought for the day*. In an increasingly secular world, many find this 3-minute slot every day at 11 minutes to 8 on the *Today* programme an anachronism. But while it is true that most of the speakers have religious beliefs (although Sikhism, Judaism and Buddhism are in there with the more conventional various Christianities), the *Thought...* is more often a lesson in ethics or a reflection on human behaviour than a call to prayer.

On that day, the lesson began with the story of Richard Baker's brother — not the Richard Baker of newscaster and classical music fame, but Richard Baker the local DJ, convicted of a series of rapes in Cornwall. He was convicted after his brother contacted the police. In common parlance his brother shopped him.

Most of us find rape an appalling crime. I have no reason to believe that friends and relatives of Richard Baker are any different. Except that the brother's reward for his public service, which has seen a dangerous man put out of harm's way, is to be ostracised, threatened, and sent hate mail.

Why does this rather distasteful story occupy my thoughts? Because it is the human condition. It takes great courage to risk everything and turn on one's own kind. Loyalty to the group is sometimes, as in an army platoon behind enemy lines, everything. If there is no loyalty at all there can be no groups; loyalty underlies human behaviour. In the wake of the recent much publicized medical misdemeanours, doctors are being told that the patients must come first. Perhaps that is right, but the people shouting so loud about doctors protecting one another should think what they would do if one of their own were to stray. Would they always put third party interests first? Would they risk being shunned by their fellows? It's not doctors who protect one another, it's humans in groups: in families, in companies, in tribes, in nations. It's sometimes an unpleasant business, but trying to alter human nature can have awkward repercussions.

The self-righteous denigrators within and without the medical profession should perhaps examine a few motes in their own eyes, and just ponder awhile what those repercussions might be. I hope that I will do the right thing by society if I find myself doubting a friend and colleague, but I may also have to understand why it becomes less easy to find someone to sit with at lunch. HM

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