Medical Memorandum

Trichobezoar Presenting as Nutritional Oedema

Bezoars, or masses of foreign material in the stomach and intestines, are known to occur in both man and animals. Their presence in the stomach of goats has been known for centuries, and magical healing properties were accorded to the concretions found there.

Trichobezoars, or hair-balls, are masses of hair, wool, or similar substance, matted together and forming varying amounts of indigestible matter. As would be expected, trichobezoars affect the gastro-intestinal tract and give rise to dyspepsia, peptic ulceration, haematemesis, perforation, intestinal obstruction, exhaustion, and inanition. The following case is of interest in that the presenting symptoms were oedema of the extremities and paraesthesiae.

CASE REPORT

A girl aged 15½ was referred to the out-patient department complaining of swellings of her feet, ankles, and legs for three months, and of her fingers for one week. There was no history of sore throat, injury, or pain, but her ankles were stiff in the mornings. Occasionally her toes had become blue and numb, and there had been paraesthesiae in her feet, and nocturnal cramp in her legs. She did, however, have infrequent "bilious attacks" and dizzy spells, but these antedated the swellings by many months. Anorexia had been present for one week. Increased frequency of micturition was present, ten times daily and four times nightly. Her periods and bowels were regular. She had been confined to bed intermittently for three months without effect.

There was nothing significant in her previous medical history. She and her elder sister were orphans, having been brought up by an aunt, who was very attached to them, as they were to her.

Examination revealed a bright, co-operative slim-built girl of average intelligence. During the early part of the physical examination a comment was made about her hair style. "I used to pull it out," she said. A provisional diagnosis of trichobezoar was made on examination of the abdomen, where a hard, painless, smooth, mobile mass was palpated, extending from under the costal margins, down as far as the umbilicus. The diagnosis was confirmed by the patient, who then, when asked, admitted having swallowed her hair intermittently for

FIG. 1.—Radiograph showing trichobezoar.

over three months. Pitting oedema was present on her feet and legs half-way up to her knees, and was also present on her fingers.

Investigations.—Hb, 81%; W.B.C., normal; plasma proteins, 6.9 g./100 ml. (albumin + fibrinogen 2.6 g., globulin 4.3 g.). A:G ratio 1:1.6; blood urea 26 mg. per 100 ml. Urine was normal. The trichobezoar was visualized on x-ray examination following two mouthfuls of barium sulphate solution (Fig. 1).

The patient was admitted that day, and the trichobezoar was removed the following day through an upper midline

incision in the abdominal wall and a transverse incision across the lower anterior wall of the stomach. The hair-ball came away as a complete cast of the stomach and first two parts of the duodenum, where it showed signs of digestion and decomposition. Its fresh weight was 1½ lb. (794 g.) (Fig. 2).

FIG. 2.—Photograph of trichobezoar.

The girl made a speedy recovery and soon regained her appetite on a high-protein diet, supplemented with vitamin-B complex. The oedema rapidly disappeared, and there were no further symptoms of cramps or paraesthesiae. Ten days after the operation, although the total plasma protein level had not yet risen, the A:G ratio was 1.4:1. When seen one month later she had put on weight and her hair was growing thick and long.

COMMENT

Trichobezoars most commonly occur in females (90%), and, of these, 80% arise under the age of 30 years. De Bakey and Ochsner (1938), in a comprehensive review of the world's literature, collected 171 cases and added one case of their own. They showed that the effects of bezoars were intestinal obstruction, gastro-duodenal ulceration leading to haematemesis, perforation and peritonitis, inanition, and exhaustion. A case presenting with intestinal obstruction is reported by Trafford (1954), with perforation (Osmond and Price, 1951), vomiting, and colitis with nutritional upset from disordered liver function (Nussey and Leask, 1949). Cases occurring in children are recorded (Fox and Stiles, 1951; Hurwitz and McAlenney, 1951). Davis (1921) reported a case with severe abdominal pains, indigestion, vomiting, and oedema of the limbs. In his case the hair-ball weighed 6½ lb. (2,950 g.) fresh, but the average weight is 1½ lb. (680 g.).

In the case reported above, the possible effect of the trichobezoar was to cause a protein deficiency, as was shown by the inverted A:G ratio. That the oedema was not of renal origin, such as might have been produced by pressure effects upon the renal veins, was shown by an absence of albumin in the urine, while the blood urea level was 26 mg. per 100 ml. Liver-function tests were not performed. Furthermore, when the hair-ball was removed the A:G ratio returned to normal within 10 days, and the oedema rapidly subsided. The period of hair-swallowing, so far as could be judged from the girl and her foster-mother, started only two or three weeks before her ankles first began to swell, so the effect of the trichobezoar was relatively rapid.

I thank Dr. J. G. Dathan and Mr. G. G. Crowe for permission to publish this report and for help and advice, and Mr. J. E. Turner and Mr. B. Goodfellow for the x-ray film and the photograph.

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