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Case Report

Trichobezoar causing malnutrition

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ABSTRACT

Trichobezoar is a rare and uncommon disease usually found in young and adolescent girls suffering from psychiatric illness mainly arising from trichotillomania (recurrent and irresistible urge to pull out one's own hair) and trichophagia (eating of hair) or social problem. The main symptoms are pain abdomen, vomiting and nausea etc which later can cause severe complications leading to surgical along with medical management.

Keyword: Trichebezoar, Malnutrition, Trichotillomania

INTRODUCTION

A bezoar is a mass of foreign and intrinsic material found in the gastrointestinal tract usually in the stomach. A bezoars can be classified in six types: phytobezoar (indigestible plant material), trichobezoar (hairball), lithobezoar (small stones), pharmacobezoar (mostly tablets or semi liquid masses of drugs), plastic bezoar (plastic) and lactobezoar (inspissated milk).[1] Phytobezoar is the most common form, while trichobezoar constitute less than 6% of all cases.[2] Trichobezoar is usually seen in adolescent girls, often with an underlying psychiatric illness mainly arising from trichotillomania (recurrent and irresistible urge to pull out one's own hair) and trichophagia (eating of hair) or social problem. Trichotillomania is a DSM-IV-TR 312.39 psychiatric classification of impulse control disorders.[3] Swain first described trichobezoar while conducting an autopsy in 1854.[4] Generally, patients are asymptomatic, but bezoars can give rise to epigastric pain, early satiety, nausea, vomiting, and weight loss. The most common complications reported over the years, include gastric mucosal erosion, ulceration, and perforation of the stomach or the small intestine, gastric outlet obstruction, intussusception, obstructive jaundice, protein-losing enteropathy, pancreatitis and death.[5] Trichobezoar usually is confined to the stomach but can migrate through the pylorus into the jejunum, ileum or even the colon.

CASE REPORT

A 14-year-old female patient presented to the emergency department of our hospital with cramping abdominal pain, nausea, and vomiting up to 3-5 times a day, constipation and generalised swelling over body for past one month. She also had decreased appetite and a 6-kg weight loss during the past 2-3 months. Her mother reported that the patient also suffered from trichotillomania during the past 2 years, although trichophagy could not be assured. The patient suffered from major depressive and anxiety disorders. On admission, physical examination showed a pale skin, pallor, oral thrush, bullae over hand and legs, flaky paint dermatosis. On physical examination she had signs of dehydration, cold periphery, heart rate of 107 beats/min, blood pressure of 98/63 mm Hg, respiratory rate of 20 breaths/min, and a body temperature of 37.2°C. Several irregular patches of hair loss (alopecia) and irregular hair length on the right side of her scalp parietal and occipital region were identified. Her abdomen was distended, bowel sounds were hypoactive. Laboratory examination revealed a haemoglobin level of 8.5 g/dL, platelet count of 472×10^9, and a white blood cell count of 18.7×10^9, with a predominance of neutrophils (77.8%). Biochemical analysis showed a blood glucose of 82 mg/dL, serum creatinine of 0.68 mg/dL, total proteins 3.3 mg/dL, and serum albumin 2.1 mg/dL. Radiography of

the chest and abdomen showed diffuse dilation of the stomach with a large filling defect suggesting a foreign body. Ultrasonography of abdomen showed irregular hyperechioc mass. An exploratory laparotomy was performed. On exploration, a large firm mass was felt in the stomach extending from fundus to the pylorus. An anterior gastrotomy was made and the mass was removed. The mass was foul smelling and contained densely wound bunch of hair, threads and bits of plastic. The gastrotomy was repaired in double layer with absorbable suture. The postoperative period was uneventful and the patient is under psychiatric treatment.

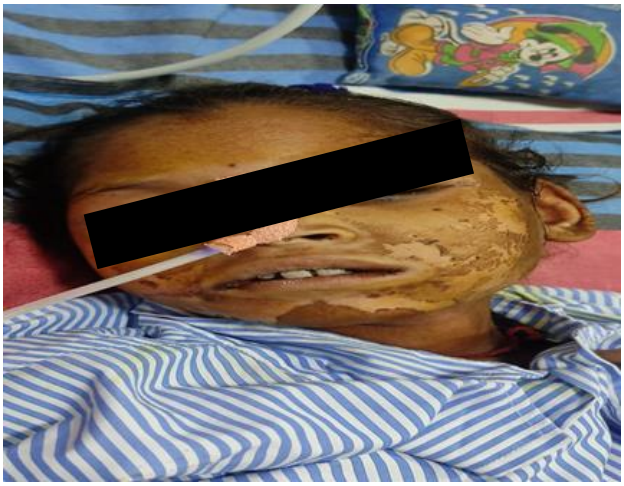

Figure 1: Flaky paint dermatosis.

Figure 2: Patches of hair loss.

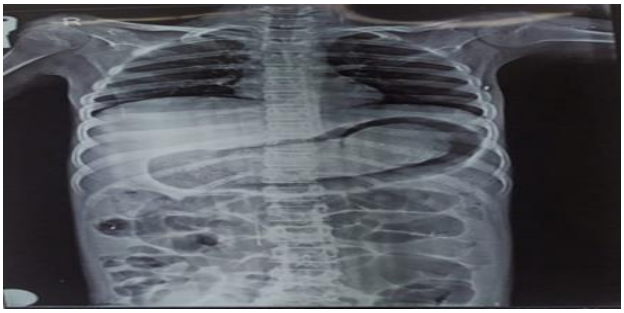

Figure 3: Radiography of the chest and abdomen showed diffuse dilation of the stomach.

DISCUSSION

Bezoar the term has its origin from the Arabic word bedzehr or may be from the Persian word padzhar.[6] The first case of trichobezoar was reported and described in 1779 by Baudamant, says that is one of the bezoars with intraluminal accumulations of indigestible ingested hair.[7] Trichobezoar is a compact conglomeration of swallowed hair and considered as a rare condition.

Trichobezoars are most commonly found in children and adolescents, but all age groups may be affected.[8,9] Naik et al reported a mean age of 10.8 years, and 96% were female patients.[10] Trichobezoars are the result of trichotillomania and trichophagia, commonly observed in young females with psychiatric disorders. Mental retardation has also been associated with trichobezoars.[9]

The clinical presentation, signs and symptoms depend on the size of the trichobezoar and the presence of complications but usually asymptomatic in early phase. The most common presentations are abdominal pain (37%), nausea and vomiting (33.3%), obstruction (25.9%), and peritonitis (18.3%). Less frequently, patients have presented with weight loss (7.4%), anorexia, hematemesis, and intussusceptions (7.4%).[10]

A preoperative diagnosis of trichobezoar may be suggested in a patient presenting with severe halitosis, patchy alopecia, a previous history of trichotillomania and trichophagia. Other associated complications of gastric trichobezoar (GT) are malabsorption related, which include protein losing enteropathy, iron deficiency anemia, and megaloblastic anemia. The resistance of human hair to digestion, the limited peristaltic propulsion due to its smooth surface, and the pyloric valve effect contribute to the accumulation of hair between the gastric mucosal folds and may assume the shape of the gastric lumen. Occasionally, fragments of the hair conglomerate may become detached and migrate to the small bowel.

The patients are recommended and advise to go for a pre-operative diagnosis of trichobezoar when they suffer from a severe halitosis, patchy alopecia and a previous history of trichotillomania and trichophagia. Some related and similar complications of GT are generally malnutrition linked, which comprises of protein losing enteropathy, iron deficieny anemia and megaloblastic anemia. Due to the mastication and fletcherism the hair ball goes unnoticed and trichobezoar continues to grow in size and weight. The GT takes the shape of the stomach as a single solid mass when it is at its largest. The GT in the patients reported here in the study had completely occupied the stomach and took its shape.

Hair fibres were blackened as a result of denaturation of hair protein by gastric acidic contents and got covered with mucus containing food waste. Putrid smell resulted due to the decomposition and fermentation of fats and retained food. Gastric outlet obstruction results due to

large trichobezoar. Intestinal obstruction in the terminal ileum is uncommon and may cause ischemia and perforation other complications are intussusceptions (1.85%), pancreatitis (0.92%), and cholangitis (0.92%).[9]

Upper gastrointestinal endoscopy is considered to be the gold standard for the diagnosis of the trichobezoar.[11] Abdominal CT scan is the most accurate imaging test concerning the presence of trichobezoars, since it demonstrates heterogeneous, mottled intra-luminal mass with low attenuation and air trapping.

Plain abdominal films are nonspecific but may be useful to confirm a clinical diagnosis of gastrointestinal obstruction or perforation. Air accumulation in the trichobezoar may give a mottled appearance. Ultrasound provides no pathognomonic signs, but a hyperechoic curvilinear dense strip at the anterior margin of the lesion associated with complete posterior shadowing has been described.

The management of a GT must involve removal of the mass and prevention of recurrence by addressing the underlying physical or emotional cause. Laparotomy and gastrotomy is the most effective and therefore the most common technique in the medical literature. Although studies of the pharmacotherapy of trichotillomania remain inconsistent, some patients seem to respond to fluoxetine or other serotonin reuptake inhibitors.[11] To decrease recurrence, psychiatric follow-up is indicated.

CONCLUSION

We put before this unusual case study to raise awareness about trichobezoar which is considered a rare presentation with significant morbidity and mortality if a high index of suspicion is not maintained. Recurrence is extremely rare after surgical intervention. It is suggested that long term psychiatric and psychological support in the community must be organised to lower the risk of recurrence.

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