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Double Gastric Trichobezoar - A Case Report

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Abstract: ***Bezoars are concretion of human or vegetable fibers that accumulate in the gastro-intestinal tract. Most common type of bezoar in humans is trichobezoar and almost all patients with a trichobezoar suffer from trichotillomania. Multiple giant bezoars which totally fill the stomach lumen and have extension to small intestine (Rapunzel Syndrome) are very rare. This is a case report of a young female who had a history of trichotillomania, trichophagia and pica. After investigations, she was diagnosed as a case of double trichobezoar in stomach with distal one extending to duodenum.***

Keywords: Abdominal mass; Trichobezoar; Rapunzel Syndrome

1. Introduction

Trichobezoar is a concretion of human hair that accumulates in the gastro-intestinal tract. In the classic review of DeBakey & Oschner, 80% of trichobezoars were found in patients younger than 30 years.[1] Rapunzel Syndrome is an unusual and rare form of trichobezoar extending into the small intestine. This report describes a double trichobezoar with distal one extending to duodenum in a young female.

2. Case Report

A 20year female came to mahatma Gandhi hospital with chief complaint of lump in abdomen since 5-6years which aggravated in last 10 days. It was associated with pain in abdomen. She had 1 episode of vomiting 5 days back. Bowel habits were normal and there was no history of fever or increased flatulence.

On examination, hair loss was present, patient was pale. On abdominal examination, there was a non-tender ballotable lump in epigastric region extending to right hypochondrium, right lumbar and umbilical region. Per rectal and per vaginal examinations were within normal limit.

Fig ing double gastric trichobezoar

Figure 2: CT abdomen showing mottled, mesh like, air trapping mass in stomach

Usg whole abdomen was suggestive of hyperechoic mass with acaustic shadow. CT whole abdomen was suggestive of two heterogenous air-trapping mottled masses in the stomach with distal one extending to duodenum. Upper Gastro-intestinal Endoscopy was performed which was also suggestive of trichobezoar which could not be removed by endoscopy.

Psychiatric evaluation was done. Rorschach test showed anxiety with depressive tendency with impulsivity in nature. An interview with her mother disclosed the history of pica, habit of pulling hair and eating hair. She was than diagnosed as a case of trichotillomania with trichophagia with double gastric trichobezoar.

Laparotomy with upper midline incision followed by transverse gastrostomy was done to remove the trichobezoar with proximal measuring 16cm X 7cm X 5cm and distal trichobezoar measuring 9cm X 7cm X 4 cm and extending to the proximal duodenum. Postoperative period was uneventful. Psychiatric follow up was arranged for the patient.

Figure 3: Intra-operative picture with stomach being delivered out through a upper midline incision

Figure 4: Intra-operative picture showing transverse gastrostomy with trichobezoar being removed

Figure 5: double trichobezoar retrieved

3. Discussion

Bezoars are the foreign bodies in the gastro-intestinal tract that increase in size by the accretion of non-absorbable food or fibers. Interestingly, the term 'bezoar' is derived from Arabic 'badzehr' or from Persian 'panzehr' both meaning counterpoison or antidote.[2,3]Most common type of bezoar inhumans is trichobezoar. Bezoars can also be made up of vegetable or fruit fibers (phytobezoars), milk or curd (lactobezoars) or any indigestible material. The first description of a post-mortem human bezoar was by Swain in 1854.[4] DeBakey & Oschner reported that about 80% of individuals in whom trichobezoars developed were younger than 30 years and 90% were female.[1] One reported male case ate the hair of his sisters.[5]

Almost all patients with a trichobezoar suffer from trichotillomania. About 1% of population has trichotillomania and about one third of these individuals exhibit trichophagia, approximately 1% of these patients eat much hair that they need to be operated upon.[6]

A small number of patients have been reported in whom the gastric trichobezoar has a long tail and extends into the small bowel. This condition, known as the Rapunzel Syndrome, occurs more exclusively in young girls.[7] Bezoars are known to cause gastric ulcers, intestinal obstruction or perforation, haemorrhage, peritonitis, anemia and malabsorption syndromes.[8] Rarely jaundice, pancreatitis, or colonic obstruction may occur if large bezoars develop.[9] But in our case it presented with an abdominal lump.

Trichobezoars form when hair strands, escaping peristaltic propulsion are retained in the gastric mucosa and with peristalsis they enmesh into a ball. Ball of hair becomes matted together and assume the shape of stomach, usually as a single solid mass.[10,11] The acidic contents of stomach denature the high protein and give the bezoar its black colour.[12,13]

Ultrasonography (USG) and Computed Tomography (CT) scan are reliable methods for diagnosing gastro-intestinal tract bezoars.[14] But the gold standard for diagnosis is upper gastro-intestinal endoscopy. In addition to providing direct visualisation, this procedure allows sample taking &

potentially therapeutic intervention.[15] MDCT of a trichobezoar shows large heterogenous, mottled, mesh like, air trapping mass at the site of obstruction.[16,17] MDCT can provide us with more information than conventional radiography. So that spontaneously fragmented and impacted pieces of trichobezoars will not be overlooked, whereby re-operation is avoided, as reported by Hoover.[18]
Therapy for any bezoar necessitates removal & prevention of recurrence. Small bezoars may be amenable to naso-gastric lavage or suction, a clear liquid diet and use of prokinetic agents. Bezoars may be fragmented mechanically or through use of digestive enzymes.[19] Novel therapies reporting successful removal include extracorporeal shock wave lithotripsy[20], endoscopic removal with a gallstone lithotripsor[21]& removal by a modified percutaneous approach in which laparoscopy is used.[22] Surgery is indicated when a very large or solid bezoar causes perforation or haemorrhage, or in case of Rapunzel syndrome, when there is significant extension of bezoar.[23] But since trichobezoar are too hard to cut or dissolve, large & symptomatic trichobezoars must be removed surgically via an open or laparoscopic approach.[24,25] And obviously it is important to prevent further formation of trichobezoar by psychiatric evaluation and treatment with arranging psychiatric follow-up. Although, study of the pharmacotherapy of trichotillomania remain inconsistent, some patients seem to respond to Fluoxetine or other serotonin reuptake inhibitors.[26]

4. Conclusion

In a young female presenting with abdominal lump, trichobezoar should also be considered as a differential. Endoscopy can both visualise and retrieve the trichobezoar but for large and hard trichobezoar surgery has to be done. Psychiatric evaluation and management of the patient is very important specially to prevent recurrence.

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