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Gastric Trichobezoar: A Case Report

Prof Iqbal Aziz[1], Dr. Albina[2]*
[1]Professor, Department of Jarahat, Ajmal Khan Tibbya College & Hospital, Aligarh Muslim University, Aligarh, U.P. India
[2]Assistant Professor, Department of Jarahat, State Takmil-ut-Tib College & Hospital, Lucknow University, Lucknow, U.P. India

Case Report

***Corresponding author**
Dr. Albina

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Abstract: Trichobezoar is a rare intriguing disorder in which swallowed hair accumulate in the stomach. Trichobezoar occur most frequently in younger female patients with psychiatric disorders (Trichotillomania and trichophagia). We report a case of gastric trichobezoar in 22 year old female patient, who presented with the complaints of pain in abdomen, loss of appetite and lump in abdomen. Patient was having some cachectic look and without any history of psychiatric disorder and previous gastric surgery. She was investigated with ultrasonography, Barium meal study followed by Upper gastrointestinal endoscopy, which confirmed the diagnosis of trichobezoar. She underwent gastrotomy, trichobezoar was removed and she recovered well. Patient was advised to consult in psychiatry but we lost the patient as she did not return in follow up.
Keywords: Trichobezoar, Trichotillomania, Trichophagia, Endoscopy, Gastrotomy.

INTRODUCTION

Bezoars are conglomerates of undigested foreign material or organic substance in the alimentary tract. The term bezoar derives from Arabic word *Badzehr* or from Persian *Panzehr*, which means antidote, because stones obtained from the stomach of intestine of animals were thought to have medicinal properties, and were used as antidotes against plaque, snake bite, leprosy, and epilepsy by physicians from 12th to 18th century [1-4]. Bezoars usually originate in the stomach and may consist of vegetable fibers (Phytobezoar), hair (Trichobezoar), inspissated milk or formulas (Lactobezoar), persimmons (Disopyrobezoar) and miscellaneous (fungus, sand, paper, etc) [5].

The prevalence of bezoars in humans is low. The first description of postmortem human bezoar was by Swain in 1854 [6].

Trichobezoar is a Greek word and it consist of a compact mass of hair, occupying the gastric cavity to a various extent [7], this compact mass of the hair may be from the patient, other humans or animals, bristles, carpet fiber, wool cloth or blankets, hair of dolls and other toys. Trichobezoars were first described by Baudomant in 1779 [1, 8]. Trichobezoars are most common in children and adolescents, especially teenage girls [9], and are often associated with trichotillomania (hair pulling) and trichophagia (hair swallowing). Trichotillomania may be unconsciously or unintentionally done and is a part of DSM IV psychiatric classification of impulse control disorder. It is believed to be related to Obsessive compulsive disorder [10, 11].The site of hair pulling is commonly from scalp, but can occur from eyelashes, eyebrows, pubic area or other parts of body [12].

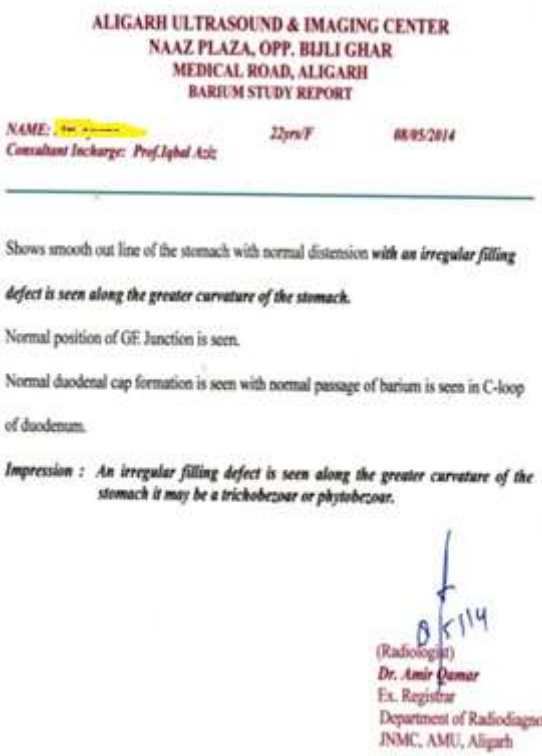
Trichobezoars present with sign and symptoms of acute abdomen and gastric outlet obstruction. These include abdominal pain, nausea, bilious vomiting, haematemesis, anorexia, early satiety, weakness, weight loss and abdominal mass, depending upon the degree of obstruction [5, 13, 14]. Patients are often asymptomatic or display symptoms indistinguishable from other gastrointestinal disorders resulting in delayed diagnosis and potential life-threatening complications. Thus the management and treatment remain a difficult task for patients and healthcare professionals. The most common complication associated with Trichobezoar is intestinal obstruction [15] and less frequently small bowel perforation [16]. The management of Trichobezoar includes a wide spectrum of treatment, from conservative treatment to surgery or endoscopic intervention. Here we present a case report of Gastric Trichobezoar in an adolescent female that has been managed by Laparotomy with Gastrostomy.

CASE REPORT

A 22 year old young married woman reported in surgery O.P.D. with complaints of pain in abdomen,

loss of appetite and lump in abdomen for last 3 months. Her abdominal examination revealed the presence of large, hard mass in epigastric region, it was mobile and nontender with no other remarkable features. The abdominal ultrasonography showed a solid mass in stomach with multiple enlarged lymph nodes (para-aortic, para-caval and mesenteric groups) with free fluid within the peritoneal cavity (Fig-1). Her complete haemogram and X-Ray chest were normal. On further evaluation a barium study showed irregular filling defect along the greater curvature of the stomach and showed a possibility of a Trichobezoar or Phytobezoar (Fig-2). An upper gastro-intestinal endoscopy was eventually performed and it confirmed the presence of Trichobezoar occupying the gastric cavity (Fig-3).

Fig-1: X-Ray chest



ALIGARH ULTRASOUND & IMAGING CENTER
NAAZ PLAZA, OPP. BIJLI GHAR
MEDICAL ROAD, ALIGARH
BARIUM STUDY REPORT

NAME: [redacted] 22yrs/F 08/05/2014
Consultant Incharge: Prof.Iqbal Aziz

Shows smooth out line of the stomach with normal distension ***with an irregular filling defect is seen along the greater curvature of the stomach.***

Normal position of GE Junction is seen.

Normal duodenal cap formation is seen with normal passage of barium is seen in C-loop of duodenum.

Impression : An irregular filling defect is seen along the greater curvature of the stomach it may be a trichobezoar or phytobezoar.

8/5/14
(Radiologist)
Dr. Amir Qamar
Ex. Registrar
Department of Radiodiagnosis
JNMC, AMU, Aligarh

Fig-2: Report

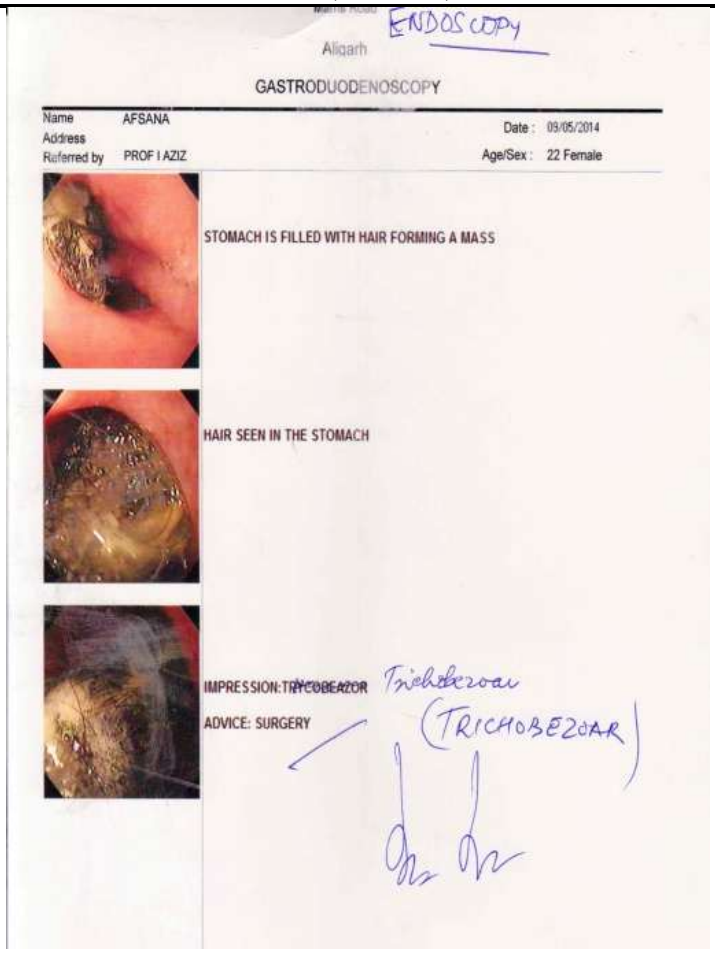


Fig-3: Trichobezoar occupying the gastric cavity

On general examination she was some cachectic and afebrile with 10 gm% haemoglobin. No alopecia was noted on the scalp, but her hairs were thin and broken at places over the scalp. On direct questioning, she did not admit to history of trichophagy. She did not give any personal or family psychiatry history. At laparotomy a large hairball removed from stomach through a gastrostomy (Fig-4). She recovered completely post-operatively. On her discharge from the hospital, she was advised for the psychiatric consultation, but we lost her in follow up, as she did not return.

Fig-4: hairball

DISCUSSION

Bezoar is an uncommon condition of which approximately 300 cases have been reported in the literature. The world 'bezoar' used to describe large concretions that collect in the stomach and fail to pass through the intestine, which is a result of ingestion of indigestible organic matter, such as hair (Trichobezoars), vagitable and fruit matter (Phytobezoar) etc., of all the verities, trichobezoar seems to be the most common and comprise 55% of all bezoars [1]. Reported in the 18th century [17], Trichobezoar is a combination of "Trich" meaning hair in Greek and "bezoar" meaning poison antidote in Arabic or Persian [3].

It is believed that the smooth surface of hair does not allow for it's propagation through peristalsis, getting trapped in the mucosa [9], however, the stomach of normal individuals is able to clear even large foreign bodies in upto 80 to 90 % of the cases, which may imply that bezoar formation occurs in the presence of both altered gastric anatomy or physiology and continued ingestion of the offending substances [18, 19].

Trichobezoar are usually associated to underlying psychiatric disorders, such as depression, obsessive compulsive disorders, body dysmorphic disorders and particularly trichotillomania [5, 13, 18], however the prevalence and co-morbidity is unclear. Depending on the case series 5 to 30% of the patients with trichotillomania engage in trichophagia [2, 8, 9], while 1 to 37.5% of these will develop a trichobezoar [2, 11, 12, 14].

Trichobezoar patients are usually referred in a late stage to surgery units. On the other hand, these patients may not be identified by clinicians as having psychiatric problems, or they may simply be lost in psychiatric referral after surgical recovery. This was the case of the patient described, who never recognized engaging in trichotillomania and trichophagia, and didn't have any sign which could suggest such behavior, we lost the patient in follow up after recovery from surgery as well.

Trichobezoar consists of a large ball of hair with entrapped undigested dietary fat. It may be so large to take upto the shape of the stomach. The ingested hair in the trichobezoar is always black due to denaturation of proteins in highly acidic gastric juice. The patients are mostly young women (90%) with a peak incidence in second and third decade. Trichobezoar has also been reported in children [20].

Clinical manifestations of gastric trichobezoar are a palpable abdominal mass, which is most commonly followed by abdominal pain, anaemia, nausea, vomiting, weakness, weight loss and hematemesis. Qureshi *et al*., [21] concluded that trichobezoar is a condition to think of in case of mobile abdominal mass. The clinical symptoms of trichobezoar vary considerably from person to person. Depending on the size and position of trichobezoar.

The diagnosis of Gastric trichobezoar can be confirmed by radiography or endoscopy. Plain films of the abdomen may reveal amorphous, granular, calcified or whirlpool like configuration of solid and gaseous material within the stomach [22]. In some instances, the bezoar is so compact that a layer of air envelops it and, in light of long term accumulation, calcification is often observed, Upper gastrointestinal studies with the use of contrast medium confirms the presence of a bezoar. On ultrasonography, the echogenic arch of air between bezoar and gastric wall is pathogonomic and may be enhanced if fluid is administered concomitantly during the examination. Compound tomography vividly demonstrates trichobezoars as free floating filling defects with the stomach, especially in the orally administered contrast medium.

The complications of bezoar formation are either mechanical or traumatic. Persistent irritation of gastric wall by the bezoar can cause ulceration, haemorrhage or perforation. However mechanical complication is more common and are obstruction and ileus, the Gastric trichobezoar may extend into the duodenum, some broken-off pieces may migrate distally into the intestine and case obstruction or ileus [23].

The treatment of Gastric trichobezoar is surgical [24] or endoscopic removal. Laparoscopic removal of trichobezoar has also been reported [25]. The reported recurrence of gastric trichobezoar [26], emphasizes the need for counseling in these patients. Bouwer and Stein concluded that the medical and psychiatric squeal of trichotillomania should not be underestimated and that pharmacotherapy a useful role in some patients with this disorder. The classification of trichotillomania is still debatable.

Therapy for any bezoar necessitates removal and prevention of recurrence. Small bezoars may be amenable to nasogastric lavage or suction with a clear liquid diet and the use of prokinetic agents. Bezoars may be fragmented mechanically or through the use of digestive enzyme [27].

Fragmentation by enzymatic therapy with use of chymopapain, meat tenderizers cellulose, or acetylecystine has not been convincingly efficacious. Endoscopic retrieval and fragmentation are frequently used for proximal bezoars, whose size and density are not prohibitive; however, the procedure can be technically challenging and fragments may migrate distally and cause small bowel obstruction [22].

Novel therapies reporting successful removal includes extracorporeal shock wave lithotripsy [28], Endoscopic removal with gallstone lithotripter [29] and removal by modified percutaneous approach in which laparoscopy is used [30].

Gastric trichobezoar can be easily extracted through a small gastrotomy; the duodenum and jejnum should be palpated carefully for hair balls that may have broken off from the primary mass. In the presence of an intestinal bezoar discovered at laparotomy, the prevalence of a concurrent gastric bezoar is 20%.

After trichobezoar removal, prognosis is good if psychiatric therapy to control habitual trichophagia is successful. In patients who have undergone gastrotomy, the recurrence rate is 13.5% despite preventive measures.

CONCLUSION

Trichobezoars requires a high index of suspicion for diagnosis and should be considered as a differential diagnosis in young female patient with a mobile epigastric mass. Diagnosis can be easily made with the use of barium study and endoscopy. Management always requires surgical removal. It is emphasized that majority of these patients have an underlying psychiatric or social disorder. A multidisciplinary approach is essential to prevent recurrence of the problem.

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