

Hard to swallow, harder to digest: Bezoars seen in Psychiatric conditions

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Introduction

Bezoars are retained concretions of indigestible foreign material that accumulate and conglomerate in the G.I tract most commonly in the stomach. The term Bezoar comes from the Persian “pahnzehr” and the Arabic “badzehr” both of which mean counter-poison or anti dote. Bezoars can be classified into 4 types based on their origin and components: Phytobezoars, trichobezoars, lactobezoars and pharmacobezoars. Other rare, less frequent bezoars are unclassified and include materials such as plastic and metal. Predisposing risk factors for bezoar formation are gastric surgeries, hypothyroidism, diabetes mellitus, cystic fibrosis and psychiatric illnesses like intellectual disability, depression, psychosis and personality disorders.¹ Here we present a series of different psychiatric cases with different types of bezoars.

Case 1

A 64 year old male patient presented to surgical outpatient department with the chief complaints of abdominal pain, nausea, and vomiting on and off since the past 6 months. The patient also complained of weight loss of over 8kgs during this period. On history taking, the patient was found to be a known case of schizophrenia from the past 30 years currently on antipsychotic medication. On physical examination a large abdominal mass was found and abdominal ultrasound was confirmatory of it. Exploratory laprotomy was performed by the surgical gastroenterologist and a large phytobezoar was extracted. Post surgery the patient was referred to Psychiatry department for further evaluation and management of his condition. Upon psychiatric interview, patient reported an irresistible urge to eat grass associated with raise in tension which was relieved only after ingestion of grass. Patient denied any command hallucinations in this regard. The urge to eat grass persisted and there was no relation to exacerbation and remission of symptoms or antipsychotic medications. Fluoxetine was added to his current treatment regimen, and on follow up the patient reported an improvement in his symptoms.



Fig. 1: Upper G.I endoscopy showing a phytobezoar

Case 2

A 16 year old female patient suffering from Mild Mental Retardation with behavioral problems, was referred to Psychiatry outpatient department after being operated for trichobezoar. On interview, the informant gave a history that the patient was constantly plucking her hair from the scalp and eyebrows since 4 years resulting in multiple bald spots over frontal and parietal regions and a loss of eyebrows. She had a peculiar behavior of eating those plucked hair. The patient would not refrain from her behavior even after repeatedly telling her not to do it. Hair pulling persisted even after improvement in behavioral problems. Family history was positive for OCD in maternal aunt. Fluoxetine was added to the treatment regimen with improvement in symptoms over the next couple of months.

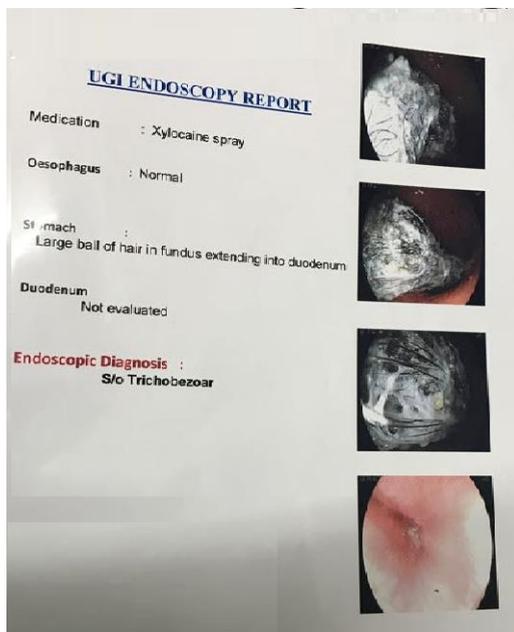


Fig. 2: Upper G.I Endoscopy showing Trichobezoar

Discussion

The ingestion of foreign material is a comparatively rare psychopathological behavior. In children, it can occur in regressive states due to developmental disturbances.² Among adolescents and young adults, it may be interpreted as self-injuring or suicidal behavior³ or associated with eating disorders.⁴ Moreover, challenging behaviors, such as the ingestion of non-food items, i.e., pica disorder frequently occurs with severe autistic disorders and intellectual disability.⁵ Although rare, this pathological behavior has also been reported in patients suffering from psychosis and personality disorders.⁶ Swallowing foreign material can also present in Munchhausen syndrome or as an act of malingering, often seen in prisoners.⁷

Of the various foreign materials ingested, abundant literature is available for cases of hair ingestion leading to Trichobezoar formation. Trichobezoars were described first by Baudamant in 1779. Trichobezoars are thought to form when hair, once swallowed, escapes peristalsis in the stomach due to its slippery surface, and becomes trapped in the gastric folds of mucosa. As more hair accumulates from repeated ingestion, peristalsis causes this ball to become enmeshed and harden which with time assumes the shape of the stomach. Ultimately, this may result in an obstructive foreign body or cessation of peristalsis.⁸⁻¹¹

Trichobezoar is usually associated to underlying psychiatric disorder, such as depression, obsessive-compulsive disorder, body dysmorphic disorder, and particularly trichotillomania.¹² Ninety per cent of trichobezoars occur in women, 80% of these occurring under the age of 30 years.⁸ Trichotillomania (hair pulling) and trichophagia (hair eating) may result in a trichobezoar. Trichotillomania (TTM) is a psychiatric disorder characterized by the compulsory and persistent pulling of one's hair involving the hair of the scalp, eyebrows, eye

lashes or elsewhere in the body along with compulsive ingestion of pulled hair (Trichophagia).¹³ In trichotillomania, comorbidity is described along with OCD, anxiety, depression, eating disorders. 5-30% of the persons with trichotillomania engage in trichophagia.¹⁴

Phytobezoars are concretions of poorly digested fruit and vegetable fibres that are found in alimentary tract and are mostly composed of indigestible cellulose, tannin and lignin from ingested vegetables and fruits. The commonest Phytobezoar encountered worldwide is related to the ingestion of persimmon fruit. There are several predisposing factors that influence Phytobezoar formation. Some of the common ones are previous gastric surgery, excessive consumption of fruits rich in fibres, poor dental health, insufficient mastication, diabetic gastro paresis, kidney failure, hypothyroidism, use of drugs which affect gastric motility and in a few psychiatric conditions.¹⁵

Haribhakti et al., reported a rare case of a large hard gastric phytobezoar in a 60 year old man who is a known case of paranoid schizophrenia with a long history of antipsychotic medication usage. Anti-psychotic medication alters the gastric emptying time which combined with poor mastication and consumption of large amount of indigestible solids could have led to bezoar formation in this patient. Hence modification of dietary habits is needed in patients who are on long-term anti-psychotics.¹⁶ A case study reported an 82 year old female with a long standing history of depression and previous history of hiatus hernia and cholecystectomy was operated for a large phytobezoar.¹⁷

There is sparse literature for other less frequent bezoars in psychiatric conditions. Domingo-Claros et al., reported a case of 29-year old women with schizophrenia and severe anaemia who was diagnosed with lead poisoning as a result of the pica ingestion of small metal jewellery found in her stomach during an endoscopy.¹⁸ Gupta Suresh Kumar et al., reported a case of metal bezoar in a 24 year old male with manic depressive psychosis who had history of ingesting nails and screws of varying sizes for more than a year without causing any perforation or other acute complications.¹⁹ Plastic bezoars are also rare, resulting from ingestion of plastic material, especially by mentally retarded patients.²⁰

Conclusion

Ingestion of foreign material and bezoar formation can occur due to various organic and psychiatric conditions. Evaluation of the psychiatric condition in such patients reveals varied diagnoses like depression, intellectual disability, impulse-control disorders and psychosis. Liaison with a surgeon is imperative for timely assessment of the condition and to achieve improvement in physical and mental health of such patients. Proper recognition of the psychiatric condition and its appropriate management would help in the reduction of medical and surgical morbidity associated with such behaviors.

Acknowledgements

Nil.

Funding

Nil.

Conflict of interest

None.

References

1. Sanders MK. Bezoars: from mystical charms to medical and nutritional management. *Pract Gastroenterol* 2004;28(1):37-51.
2. Petti TA, Blitsch M, Blix S, Sims L. Deliberate foreign body ingestion in hospitalized youth: a case series and overview. *Adolesc Psychiatry* 2005;29:249-87.
3. Bloch Y, Lauder A, Ratzoni G. How many pins? A case report of a girl who swallowed more than 50 pins in a suicide attempt. *Int J Adolesc Med Health* 2005;17:295-7.
4. Favazza AR, DeResear L, Conterio K. Self-mutilation and eating disorders. *Suicide Life Threat Behav* 1989;19:352-61.
5. Matson JL, Rivet TT. Characteristics of challenging behaviours in adults with autistic disorder, PDD-NOS, and intellectual disability. *J Intellect Dev Disabil* 2008;33:323-9.
6. Gitlin DF, Caplon JP, Rogers MP. Foreign-body ingestion in patients with personality disorders. *Psychosom* 2007;48:162-6.
7. Lee TH, Kang YW, Kim HJ, et al. Foreign objects in Korean prisoners. *Korean J Intern Med* 2007;22:275-8.
8. Gonuguntla V, Joshi DD. Rapunzel syndrome: a comprehensive review of an unusual case of trichobezoar. *Clin Med Res* 2009;7:99-102.
9. Frey AS, McKee M, King RA, et al. Hair apparent: Rapunzel syndrome. *Am J Psychiatry* 2005;162:242-8.
10. Pace AM, Fearn C. Trichobezoar in a 13-year-old male: a case report and review of the literature. *Malta Med J* 2003;15:39-40.
11. O'Sullivan MJ, McGreal G, Walsh JG. Trichobezoar. *J R Soc Med* 2001;94:68-70.
12. Vaughan ED, Sawyers JL, Scott HW. The Rapunzel syndrome. An unusual complication of intestinal bezoar. *Surg* 1968;63:339-43.
13. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text revision (DSM-IV-TR) Washington, Dc.:2000.
14. Bouwer C, Stein DJ. Trichobezoars in trichotillomania: Case report and literature overview. *Psychosom Med* 1998;60:658-60.
15. K. AP. Phytobezoar: A Rare Cause of Small Bowel Obstruction. *J Clin Diagn Res* 2013.
16. Das HS, Sethna K, Vyas K, Biyani NK, Rathi P, Sawant P. Gastric Phytobezoar in a Schizophrenic Patient.
17. Di Saverio S, Catena F, Coccolini F, Gazzotti F, Filicori F, Ansaloni L. Bizarre behaviour, bizarre intruder and bizarre bowel obstruction. *BMJ Case Rep* 2010;2010:bcr120092486. Published 2010 Nov 12. doi:10.1136/bcr.11.2009.2486.
18. Domingo-Claros A, Alonso E, de La Banda E. Schizophrenia and refractory anaemia with ring sideroblasts. *Br J Haematol* 2004;125(5):543. doi: 10.1111/j.1365-2141.2004.04839.x.
19. Kumar GS, Amar V, Ramesh B, Abbey RK. Bizarre Metal Bezoar: A Case Report. *Indian J Surg* 2012;75(S1):356-8.
20. Escamilla C, Robles-Campos R, Parrilla-Paricio P. Intestinal obstruction and bezoars. *J Am Coll Surg* 1994;179(3):285-8.