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Impacted "Phytobezoar" at the Base of Meckle's Diverticulum.

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Bezoars have been known to cause obstruction of any portion of the gastrointestinal tract. This case report describes a patient with a surgically treated bezoar impacted at the base of Meckel's diverticulum causing acute intestinal obstruction. In the absence of prior gastric surgery this makes one of the rarest causes of intestinal obstruction.

Introduction

The term bezoar is derived from a Persian word "padzahr" meaning "to expel poison"[1]. Bezoars although rarely found in humans, can cause obstruction of any portion of the gastrointestinal tract from the esophagus to the colon, most often following gastric surgery[2,3]. This case report describes a patient of intestinal obstruction because of phytobezoar impacted at the base of Meckel's diverticulum[4,5]. On reviewing the literature, till today only seven cases of similar kind have been reported.

Case report

A 19-years-old male was admitted in the general surgery department, he was engaged in plucking unripe mangoes during summer (Mango season) to earn money. He complained of gradual onset pain in the periumbilical area, nausea, bilious vomiting, absolute constipation and rashes all over body since two days. There was no history of previous episodes of abdominal pain or surgery. Abdomen was distended but there was no visible lump or peristalsis, bowel sounds were accentuated. Rectal examination revealed an empty ampulla. Plain film of the abdomen in upright position showed dilated small bowel loops with multiple fluid levels confirming the diagnosis of acute intestinal obstruction.

Fig.1) Meckle's diverticulum and impacted Phytobezoar at its base.

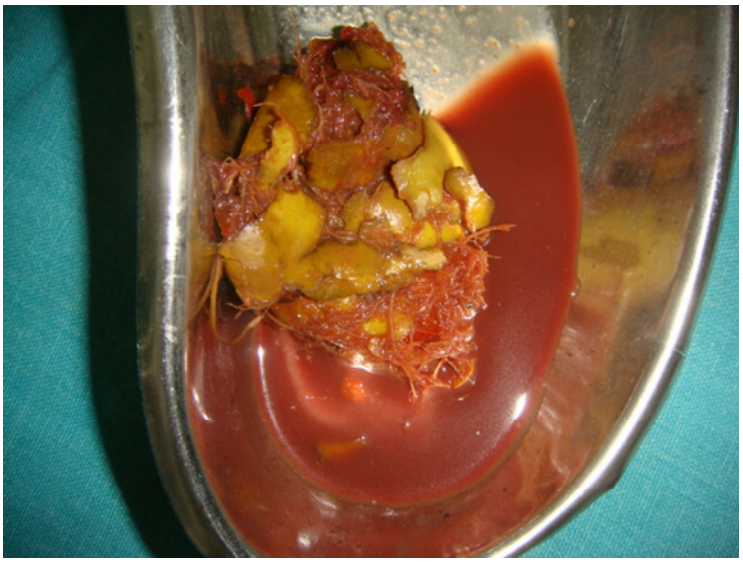

Fig. 2) Phytobezoar made up of unripe mango fibers and peels.

At laparotomy dilated and edematous loops of the small bowel up to Meckel's diverticulum were evident. Further inspection revealed that a mass was impacted at the base of Meckel's diverticulum, which was not infected. Distal ileum was collapsed and there was no evidence of perforation. Diverticulectomy was done and a Phytobezoar 10 x 5 cm oblong was removed through it (Figure 1). Phytobezoar was made up of unripe mango fibers and peels (Figure 2).

Ileum was transversely closed in two layers. The patient made an uneventful recovery and was discharged 9 days later.

Discussion

Phytobezoar is a concretion of vegetable matter found in the alimentary tract. It is a relatively uncommon cause of small bowel obstruction and often associated with a history of recent pulpy foods such as persimmons and oranges[4]. Review of literature reveals that some factors seem to be responsible for the formation of bezoar and intestinal obstruction. Improper mastication from poorly fitting dentures is present in up to 50% of cases; in fact edentulous patients may be at risk due to inadequate mastication resulting in large boluses of food entering the stomach[5,6]. Another key element in the development of phytobezoar is gastric stasis induced by gastric surgery[2,3]. Thus suggesting that poorly chewed boluses of food, but small enough to pass through pyloric canal may absorb water in the small bowel, increasing in size with impaction[7].

The differential diagnosis sometimes is difficult, including lobulated or villous intraluminal tumors of the small bowel, such as adenomas, leiomyosarcomas and metastatic melanoma[6]. Recently computed tomography has been also proposed for definitive diagnosis of small bowel obstruction secondary to bezoar[4]. Although the treatment of choice for gastric phytobezoar is nonoperative, based on gastric lavage or clear fluid diet, however phytobezoars presenting as acute intestinal obstruction require mandatory operative management[4,5].

Postoperatively it was found that patient ate plenty of mangoes in a hurry thinking he might not get another chance to eat those delicious looking mangoes.

Conclusion

Phytobezoars are a rare cause of intestinal obstruction and impacted "phytobezoar" at the base of Meckel's diverticulum more so. Diagnosis is difficult and might be intraoperative[6,7]. Although the treatment of choice for gastric phytobezoar is nonoperative phytobezoars presenting as acute intestinal obstruction require mandatory operative management.

References

1. Elgood C. A treatise on the bezoar stone. Ann Med History 1935; 7:73-80.
2. Nagel G.W, Bergera J.J Phytobezoars occluding the small intestine following subtotal gastrectomy. Am. J. Surg 1960; 99:315.
3. Moriel E.Z, Ayalon A, Eid A. et al. An unusually high incidence of gastrointestinal obstruction by persimmon bezoars in Israeli patients after ulcer surgery. Gastroenterology 1983; 84: 752-755.
4. Escamilla C, Robles-Campos R, Parrilla-Paricio P, Lujan-Mompean J, Liron-Ruiz R., Torralba-Martinez J.AIntestinal obstruction and bezoars. J Am Coll Surg 1994; 179: 285-288.
5. Hayes P.G, Rotstein O.D. Gastrointestinal Phytobezoars: Presentation and Management. Can J Surg 1986; 29: 419-420.
6. Goldstein S.S, Lewis J.H, Rothstein R. Intestinal obstruction due to bezoars. Am J Gastroenterol 1984; 79: 313-318.
7. Emerson A.P (1987) Food high in fiber and phytobezoar formation. J Am Diet Assoc 1987; 87:1675-1677.