Intestinal obstruction by an unusual foreign body

Mervyn Deitel, M.D., F.R.C.S.[C], F.A.C.S., F.I.C.S. and A. K. Syed, M.D., M.S., *Toronto*

Summary: The case is described of a patient with complete small bowel obstruction 13 days after swallowing a condom containing hashish. Treatment by enzymatic dissolution was obviously impossible. The small bowel was emptied preoperatively by a Dennis long-tube, and the impacted bolus was removed by enterotomy.

Résumé: *Obstruction du grêle par un corps étranger rare.*

Les auteurs présentent un malade souffrant d'une obstruction complète du grêle, 13 jours après avoir avalé un condom rempli de haschich. Le traitement par dissolution enzymatique étant évidemment impossible, on a enlevé le bolus par entérotomie, après avoir vidé le grêle par un long tube de Dennis.

Small bowel obstruction due to a vegetable bolus has been the subject of reports in recent years.[1-4] If it cannot be passed spontaneously or dissolved enzymatically,[5] operation is necessary, when it may be possible for the bolus to be compressed manually and milked into the cecum.[6-8] Enterotomy for removal of an obstructing bezoar may be associated with infection and morbidity.[7-8]

However, as in the instance to be described, where material has been packed into a rubber condom, this mass can neither be moulded nor compressed and broken up.

Case report

A 21-year-old man was admitted from the Emergency Department of St. Joseph's Hospital at 20:00 hrs. on October 10, 1972, complaining of episodes of severe crampy periumbilical pain, lasting from several seconds to several minutes, which had awakened him from his sleep 16 hours earlier and had gradually worsened. He had had no bowel movements nor passed flatus since its onset and had vomited green material on four occasions. He was dehydrated, the abdomen was distended, and hyperactive bowel sounds were audible.

He had recently returned from a trip to Lebanon. Before his departure, 13 days previously, he had ingested a bolus of hashish tied into a rubber condom. He had felt well until the morning of the day of admission. He gave a history of having undergone a splenectomy seven years previously following an abdominal injury.

Radiographs of the abdomen showed dilated small bowel and no gas in the colon (Fig. 1). In the left lower quadrant a large density was noted which appeared to have minute amounts of air within it.

A Dennis long-tube was passed and the small bowel intubated.[9] The long-tube drained up to 1600 ml. every eight hours. The cramps worsened, and on the morning of October 12, Gastrografin® injected down the long tube disclosed complete obstruction by a spherical mass (Fig. 2).

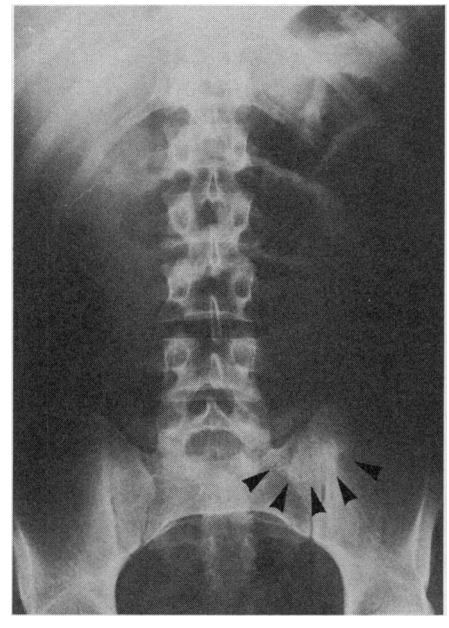

FIG. 1—Radiograph showing several dilated loops of small bowel and circular mass on the left side of the abdomen.

The same day an operation was performed and through a short transverse left subumbilical incision the small bowel was delivered. There were no adhesions. A large mass was impacted in the ileum 125 cm. proximal to the ileocecal valve (Fig. 3). The balloon of the long-tube was just proximal to the mass, and the tube had effectively decompressed the small bowel. An attempt to fragment

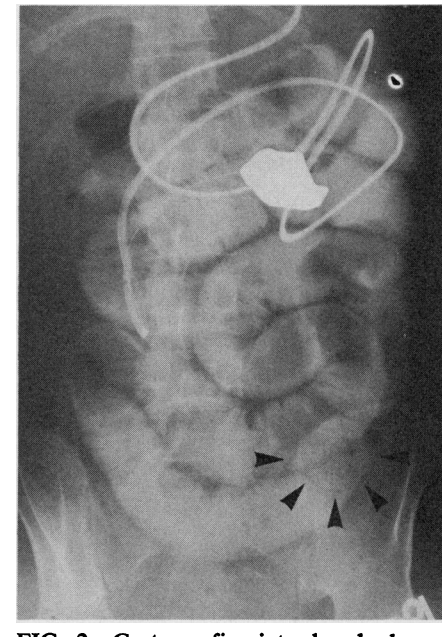

FIG. 2—Gastrografin introduced down the long-tube shows dilated small bowel; films up to two hours later showed no passage of contrast medium beyond the circular density in the ileum in the left abdomen.

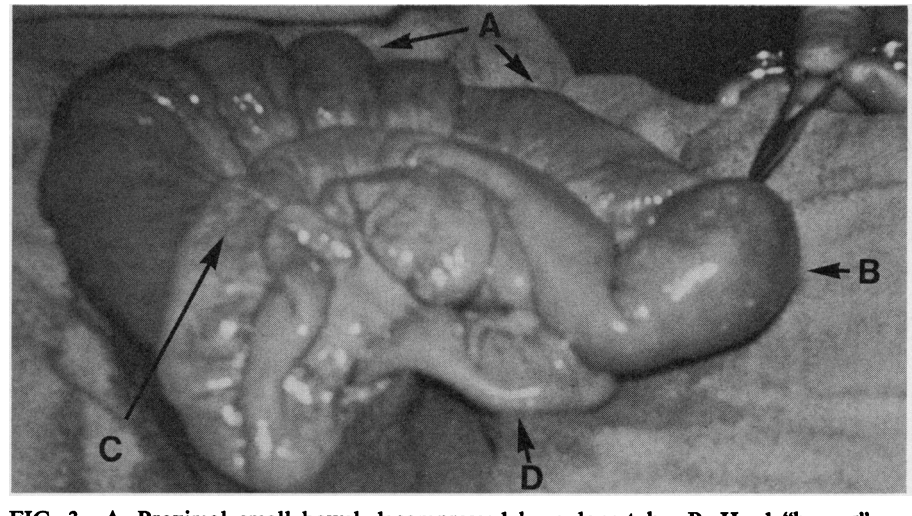

FIG. 3—A. Proximal small bowel decompressed by a long-tube. B. Hard "bezoar" which appeared to be in a package and could not be broken up. C. Distal collapsed ileum. D. Appendix (shown for orientation).

From the Department of Surgery, St. Joseph's Hospital, Toronto, and the University of Toronto.

Reprint requests to: Dr. M. Deitel, St. Joseph's Hospital, 30 The Queensway, Toronto, Ont.

the firm bolus manually was unsuccessful. Moreover, it could be milked 2 cm. distally but no further. At this site in the non-dilated bowel enterotomy was performed over the bolus, which was delivered with no apparent contamination of the peritoneal cavity, and the enterotomy was closed. He was discharged home on the ninth postoperative day after an uneventful recovery.

The specimen (Fig. 4), as described by the pathologist, "consists of a rubber condom tied into a ball-like structure measuring 6 cm. in its greatest diameter, containing a greenish substance resembling tobacco which was identified by the R.C.M.P. Laboratories as hashish."

Discussion

The long-tube decompressed the small bowel and thus permitted avoidance of peritoneal soiling at the time of enterotomy. The tube made possible preoperative radiologic verification of the obstructing bolus. At operation the balloon contents were aspirated by the anesthesiologists, after which the long-tube was withdrawn into the proximal small bowel and left *in situ* postoperatively until the patient was passing flatus.[9]

It has been our experience that Gastrografin® will pass readily beyond an obstruction if it is not complete, but here the passage of the liquid contrast medium was totally obstructed by the impacted bolus.

It is our belief that the bolus remained in the stomach for the 13 days following its ingestion, but during the night when the symptoms started, it passed through the pylorus, probably while the patient was lying on his right side. It was able to pass beyond the ligament of Treitz and, likely owing to its large size, was readily carried along the small bowel by peristalsis. Since the ileum narrows, it eventually became impacted in the lower portion.

Air bubbles in the mass observed in the radiographs represent either air trapped in the condom at the time that it was tied, gas generated by the plant material, or passage of air into the condom if the rubber was degenerating (as has been known to occur in the balloon of Cantor tubes with high-grade small bowel obstruction).[10]

The difference in the management of this "bezoar" as opposed to the phytobezoars previously reported was dictated by its rigid structure, which prevented its spontaneous passage and at operation, its fragmentation and "milking" along the small bowel in advance of the point of impaction.

References

1. Bowen FH: Obstruction of the small bowel due to boli of ingested coconut: a report of two cases. *Am Surg* 22: 1076, 1956
2. Lipin RJ, Hara M: Bezoars (Diospyrobezoars). *Am J Surg* 103: 494, 1962
3. Weinerman R, Weinerman B, McIntyre DF, et al: Ball-valve obstruction of terminal ileum of long duration by a rare phytobezoar. *JAMA* 199: 274, 1967
4. Carter DC, Macleod DAD: Obturation obstruction of the small intestine. *J R Coll Surg Edinb* 15: 13, 1970
5. Bucholz RR, Haisten AS: Phytobezoars following gastric surgery for duodenal ulcer. *Surg Clin North Am* 52: 341, 1972
6. Herschman A: Ileal obstruction due to adhesions and phytobezoar following gastrectomy: report of a case. *Radiology* 92: 1307, 1967
7. Knott I, Urca I: Intestinal obstruction after partial gastrectomy due to orange pith. *Arch Surg* 100: 79, 1970
8. Vernon JK: Small bowel obstruction secondary to repane ingestion. *Arch Surg* 98: 717, 1969
9. Deitel M: Successful use of the Miller-Abbott tube. *Can J Surg* 10: 245, 1967
10. Cantor MO, Reynolds RP: *Gastrointestinal Obstruction.* Baltimore, William & Wilkins, 1957, p 366

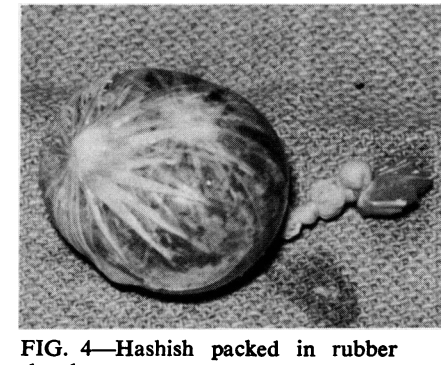

FIG. 4—Hashish packed in rubber sheath.