

# Difficult Intra-gastric Balloon Retrieval: A Different Technique

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## Keywords

Balloon dilatation · Bariatric endoscopy · Intra-gastric balloon

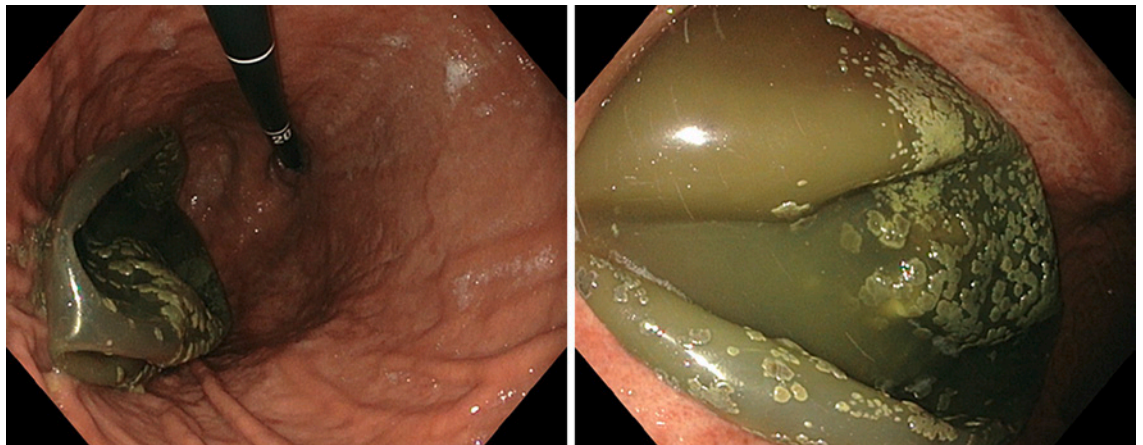
**Remoção difícil de balão intragástrico: uma técnica diferente**

## Palavras Chave

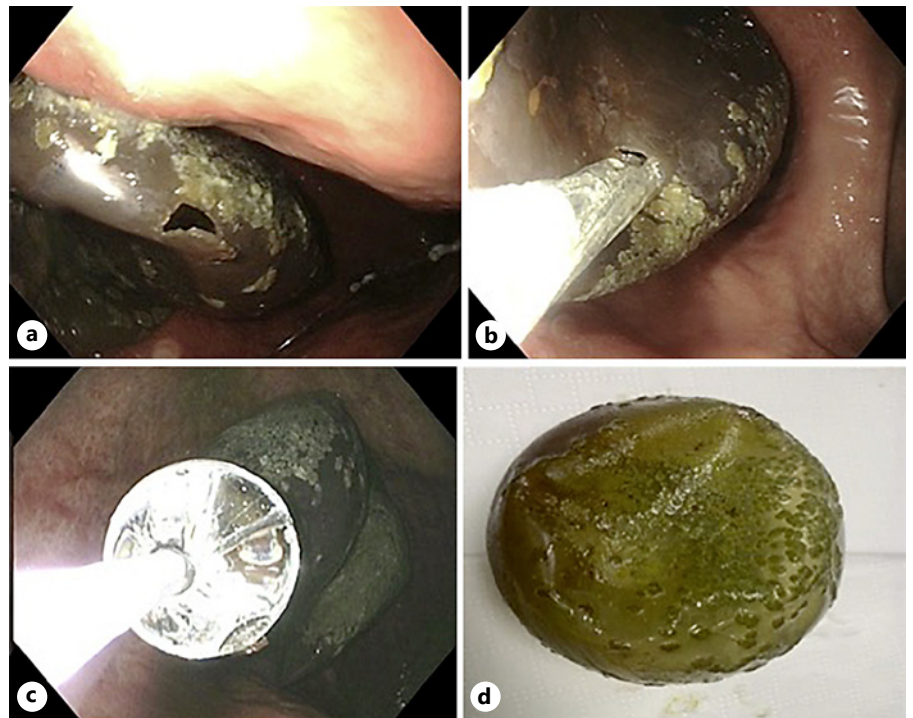
Balão intragástrico · Endoscopia bariátrica · Dilatação por balão

Intra-gastric balloon is a temporary nonsurgical treatment for weight loss [1, 2]. The standard routine for its removal consists of: (i) puncturing with a needle held in the aspirator; (ii) pushing the needle inside the balloon, leaving the catheter inside; (iii) connecting the catheter to a vacuum drainage device, and then aspirating the entire balloon content; (iv) removing the collapsed balloon with a wire grasper. We hereby present a difficult intra-gastric balloon retrieval using a different technique.

A 39-year-old woman, with no significant medical history but obesity, was referred to our center after an unsuccessful Bioenteric Intra-gastric Balloon (BIB) retrieval. The balloon had been placed 5 months earlier and since then the patient had lost 8 Kg. On the first retrieval attempt, the aspiration of the BIB content with a standard BIB kit (Apollo Endosurgery, consisting of a wire grasper removal instrument and a needle aspirator) had not resulted in its full collapse. Therefore, the balloon could not be removed, as it did not pass the esophago-gastric junction. At our unit, under propofol sedation, a second attempt to fully aspirate the balloon with the same system was ineffective, as the surface of the balloon was pliable (Fig. 1). While mobilizing the BIB with the two-prong grasper device, a small hole was accidentally made (Fig. 2a); this allowed the needle to be inserted and the suctioning of some fluid. However, it was not possible to fully aspirate the balloon. Therefore, to promote passive emptying, we decided to enlarge the hole with a through-the-scope balloon dilator (18/19/20 mm, EndoFlex® Ref. 34118PRO; Fig. 2b, c). This allowed the volume of the balloon to be reduced, which was then gently retrieved with



**Fig. 1.** BIB partially deflated in the gastric lumen (note the absence of sharp folds).



**Fig. 2.** New retrieval technique. **a** Hole in the intragastric balloon by a two-prong grasper device. **b** Through-the-scope (TTS) balloon through the hole in the intragastric balloon. **c** TTS balloon dilation. **d** Balloon retrieval.

the two-prong grasper (Fig. 2d). Re-examination of the stomach and esophagus was unremarkable, and the woman was asymptomatic afterwards. Balloon retrieval may be a challenging task, especially when it is maintained longer than the recommended 6 months [3]. Some non-standard retrieval techniques have already been described, such as the use of a larger needle with a stronger suction device, the use of a snare around the end of the

endoscope, or spraying vegetable oil over the balloon to ease balloon passage [4]. A procedure identical to ours was described by a Canadian group, who used a through-the-scope balloon dilator to allow intragastric balloon decompression. The balloon was then removed through an overtube, using a snare [5].

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### Statement of Ethics

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

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### Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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### Author Contributions

M.M.E., A.C.G., and R.P. were involved in the endoscopic procedure and in manuscript drafting. J.C. and E.A. were involved in manuscript drafting and critical revision. T.F. reviewed the manuscript and gave final approval. All authors approved the final version.

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### Data Availability Statement

All data generated or analyzed during this study are included in this article. Further enquiries can be directed to the corresponding author.