Spontaneous Per Oral Explantation of Intragastric Balloon—A Case Report

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J Digest Endosc 2019;10:124–125

Abstract

Obesity is a modern-day pandemic that was once a disease of only the affluent Western world. However, over the years it has achieved a global footprint. The need to treat obesity with nonsurgical means in patients who do not qualify or refuse bariatric surgery or in some patients as a bridge to surgery is all the more relevant now. It is for this subset of patients that a modality like the intragastric balloon holds promise. Previously reported complications of the balloon include esophagitis, severe nausea and vomiting, abdominal cramps, hiccoughs, belching, intestinal obstruction, gastric perforation, pancreatitis, and aspiration.[1] Balloon rupture/leak leading to intestinal migration and obstruction has been managed by surgical intervention. Review of literature did not reveal any report of spontaneous per oral explantation of the deflated balloon. We are reporting a case of the same.

Keywords
- ► intragastric balloon
- ► complications
- ► per oral explantation

Introduction

Obesity is a modern-day pandemic that was once a disease of only the affluent Western world. However, over the years it has achieved a global footprint. In the past decade, there has been a quantum leap in the recognition and understanding of comorbidities associated with obesity. The need to treat obesity with nonsurgical means in patients who do not qualify or refuse bariatric surgery or in some patients as a bridge to surgery is all the more relevant now. It is for this subset of patients that a modality like the intragastric balloon holds promise. The intragastric balloon induces weight loss by decreasing caloric intake due to a reduction in the available intragastric space as a consequence of its position in the stomach. Previously reported complications of the balloon include esophagitis, severe nausea and vomiting, abdominal cramps, hiccoughs, belching, intestinal obstruction, gastric perforation, pancreatitis, and aspiration.[1] Balloon rupture/leak leading to intestinal migration and obstruction has been managed by surgical intervention. Review of literature did not reveal any report of spontaneous per oral explantation of the deflated balloon. We are reporting a case of the same.

Case Summary

Our patient is a 41-year-old female with a body mass index (BMI) of 50. She was also hypothyroid and a recently detected diabetic on treatment. Since she was not keen for bariatric surgery, she was offered the option of intragastric balloon. She underwent an uneventful endoscopic intragastric balloon placement. The balloon was filled with 500 mL of methylene blue stained saline. Post procedure, she had moderate nausea and epigastric bloating sensation that subsided with standard management in 48 hours and was discharged home. Three weeks after the procedure, the patient presented to the outpatient department with the balloon having been expelled orally. She gave a history of sensation of acute nausea and bout of vomiting followed by oral explantation of the balloon, all in a matter of 2 hours that morning. There was no history of abdomen pain, vomiting, and hematemesis. On inspection, the expelled balloon revealed a defect of 1 cm in the seam with no other obvious site of leak (►**Fig. 1**). Later, a new intragastric balloon was placed and the patient had an uneventful post procedure period. She is now 5 months post intragastric balloon placement. She has lost 12 kg in this period and is on regular monthly follow-up.

DOI https://doi.org/10.1055/s-0039-1693520
ISSN 0976-5042.

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Fig. 1 Perforated intragastric balloon.

Discussion

The intragastric balloon has been used for the management of obesity since 1980. It has undergone many refinements to improve its safety and efficacy. It is an inflatable balloon made of silicone with an inflating/deflating tube-pod attached. It is placed endoscopically and is instilled with 500 to 700 mL of saline, diluted with 10 mL of methylene blue. In the event of a balloon rupture or leak, the methylene blue is absorbed into the bloodstream and excreted in the urine, which turns blue–green, providing a visible sign of malfunction.[2] The patient is thus able to detect this malfunction and report to the hospital immediately. The integrity of the balloon can also be confirmed by imaging as the air present in the tubing of the deflated balloon is forced into the balloon when the device is inflated, leading to the appearance of an intragastric air–fluid level on X-ray. The commonest side effect of this device is reflux seen in 50% and managed conservatively.[3] Rare complications reported till date include pancreatitis, esophageal or gastric erosions, gastric perforation, balloon rupture, and migration intestinal obstruction. A few case reports of balloon rupture have been published. Management options described for distal migration include observation with spontaneous migration and balloon, endoscopic retrieval, laparoscopic or laparotomy, and enterotomy and removal.[4] Balloon deflation with proximal migration into the esophagus is a much rarer event and is associated with a higher risk of esophageal perforation. Proximal migrations invariably need urgent endoscopic remedy, and spontaneous expulsion as in our case has not been reported yet.

Conclusion

The intragastric balloon is a widely used endoscopic option for the treatment of selected subset of obese patients. However, the possibility of in situ deflation of the balloon due to a leak or rupture continues to remain a small but significant risk with the potential of a catastrophic distal (more common) or proximal migration, necessitating emergency remedial measures, including a laparotomy/laparoscopy for balloon removal from the intestine. Rarely the deflated balloon may migrate proximally with equally serious consequences of an esophageal tear; aspiration or choking, mandating urgent therapeutic endoscopic intervention for removal. Our patient, while undergoing a deflation and proximal migration of the balloon, was extremely lucky to spontaneously expel it per orally with no injury to the upper gastrointestinal tract. We were unable to find a previously published case report of this nature.

Conflict of Interest

None.

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