INTRODUCTION

The endobarrier was introduced as a less invasive weight loss device to help treat obesity and reverse type 2 diabetes when implanted and removed for 1 year. The EndoBarrier is a fluoropolymer sleeve that is reversibly fixated endoscopically to the duodenal bulb and extends 80 cm into the small bowel, usually terminating in the proximal jejunum [1,2]. This endoscopically inserted device aids weight loss through mal-absorption and activating hormonal triggers [1,2] and was initially developed and trialled in 2007 [2]. Initially several studies and case reviews showed promising results. Early removal of the endobarrier device due to stent migration has been a previously reported complication [4-6]. There are no previous reported perforations due to device migration, however, this was an assumed possible complication. Here we will discuss a mostly healthy gentleman who sustained a small bowel perforation due to migration of his endoscopically inserted barrier device 11 months after it was inserted. A small bowel perforation was confirmed with an oral contrast abdominal CT.

CASE REPORT

A 50 yo gentleman with type 1 diabetes presented to the emergency department complaining of a sudden onset of a abdominal pain and discomfort associated with a low grade fever. On examination, the patient had generalised abdominal pain, however, was not peritonitic with a biochemical profile showing a wcc of 23.2 on admission. An abdominal Computerized tomography (CT) was performed confirming the patient had chronically

Key words: Endobarrier, Gastrointestinal liner, Endoluminal liner, Small bowel, Perforation.

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thickened small bowel and sustained a small bowel perforation secondary to a foreign body (Figures 1 & 2). Subsequently the patient underwent a diagnostic laproscopy which was converted to laparotomy for better surgical access. Intraoperatively it was noted that the patient had four quadrant purulent peritonitis with pus and the endobarrier device had migrated to the mid-jejunum with a localised perforation (Figure 3). There was chronically dilated and obstructed small bowel secondary to a foreign body (endobarrier device). The endobarrier device was removed through a small bowel enterotomy which was then primarily closed with 3/0 PDS (Figures 4 & 5). The patient required 2x15F Blakes drains to remain in the pelvis and left paracolic gutter and IV antibiotics for 5 days. The patient made an uneventful recovery and was discharged day 5 post operatively.

**DISCUSSION**

Initially the endobarrier device was found to be a safe, less invasive method of managing obesity and diabetes. However in late 2014, a restriction of use of this product was issued, and then the endobarrier device was later banned in 2016 [13].

Even though with initial studies providing evidence of efficacy for this product, the group sample sizes were not large enough for results to be significant. Furthermore, there is no research on long term outcomes of the device beyond 1 year [6, 8-10], however there are several reported complications requiring early removal of the device for complications such as pain, migration and obstructions.
At present it safe to assume that we can not yet mimic surgical weight loss efficacy with less invasive therapies such as endobARRIER devices [11].

CONCLUSION

EndobARRIER devices for management of weight loss and type 2 diabetes have become obsolete due to new found surgical cases of severe complications. The most common complications that were noted were pain, device migration, bowel obstruction and now small bowel perforation [12]. It is still widely accepted that bariatric surgery for management of obesity and type 2 diabetes is still the preferred gold standard of treatment.

CONFLICTS OF INTEREST

No conflicts of interest to declare.

REFERENCES


Cite this article:

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