

Acute Buried Bumper Syndrome: An Uncommon Complication of Percutaneous Endoscopic Gastrostomy.

Ankur Gupta

Department of Gastroenterology,
Sahara Hospital, Viraj Khand, Gomti Nagar, Lucknow, Uttar Pradesh, India

Abstract

Buried bumper syndrome is an uncommon complication of percutaneous endoscopic gastrostomy (PEG). Usually it is recognized as a late complication of PEG. Here we describe a patient who presented with acute buried bumper syndrome after seven days of placement of PEG.

It is important to recognize and manage this complication at an earliest, as it may lead to further severe and potentially fatal complications.

Key words: Endoscopy, Gastrostomy, Postoperative Complications, Enteral Nutrition

Introduction

Percutaneous endoscopic gastrostomy (PEG) tube placement is one of the recommended methods for providing enteral feeding in patients with swallowing difficulty and intact gastrointestinal tract. Buried bumper syndrome (BBS) is generally recognized as a long term complication of PEG placement, it is rarely reported as an early complication of this procedure. We describe a patient with acute BBS, an uncommon complication of PEG.

Case Report

A 54-year-female presented with complains of leakage of food contents from the PEG site, seven days after placement of the PEG tube.

She was suffering from altered sensorium due to ischemic stroke and PEG was indicated for enteral feeding. The PEG tube (Boston Scientific, 24Fr Standard PEG Kit and Pull) was placed uneventfully by pull technique, position of internal bolster was verified with upper gastrointestinal endoscopy (Figure 1) and the patient was tolerating feeds normally, till seven days after the procedure.

Examination of PEG site showed a normal appearing skin with leakage of food contents around it. The tube could not be inserted in the tract, an upper gastrointestinal endoscopy confirmed the presence of buried bumper

syndrome (BBS) and internal bolster could not be seen. (Figure 2).

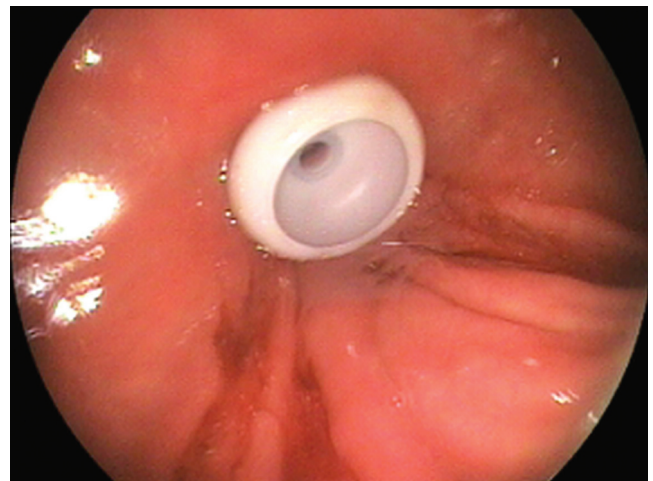


Figure 1: Position of internal bolster just after the tube was placed

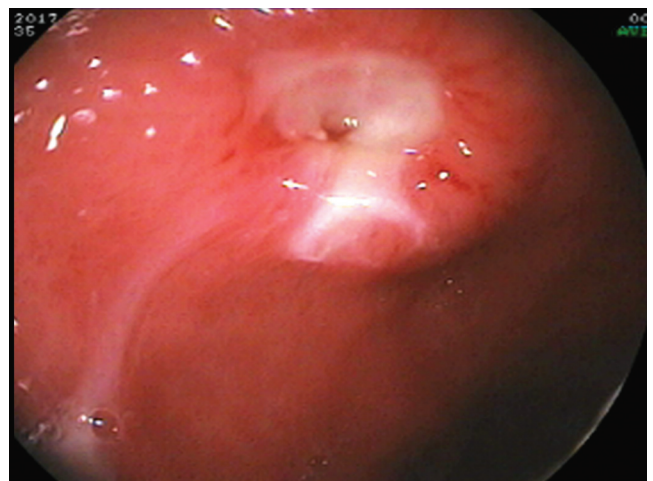


Figure 2: Gastric wall with visible fistulous opening, internal bolster is not seen in the lumen

Address for correspondence

Dr. Ankur Gupta, Consultant, Department of Gastroenterology, Sahara Hospital, Viraj Khand, Gomti Nagar, Lucknow-226010, Uttar Pradesh, India
E-mail: mail.guptaankur@gmail.com

Received 11.04.2020

Accepted 21.04.2020

Since the tube could not be inserted inside, mild traction was applied and PEG could be removed easily. Feeds were held for 12 hours and then naso-jejunal tube feeds were started. Patient was closely monitored to look for evidence of perforation peritonitis. She was discharged in a stable condition with plan to place a new PEG on follow-up.

Discussion

Although BBS is described as a late complication of PEG tube placement [1], it has been described as early as six days after the procedure [2]. In our patient suggestive symptoms begun after one week of the procedure. Symptoms of immobile gastrostomy tube, difficulty in feeding infusion and leakage around the tube has been suggested as a diagnostic triad of BBS [3]. A gastroscopy is diagnostic and is indicated whenever BBS is suspected.

BBS occurs due to pressure necrosis of gastric mucosa by internal bolster, which migrates into the gastric wall. This occurs when the bolster inside the stomach produces ischemic necrosis of the gastric mucosa and migrates into the gastric wall or subcutaneous tissue. PEG tube cannot rotate within or slide through the stoma in patients with BBS. This is because the buried bumper causes the tube to become fixed in a place. In our patient, chronic cough could have predisposed her to BBS due to worsening of pressure effect.

BBS can be further complicated by potentially fatal complications such as, gastrointestinal bleeding, perforation, peritonitis, intra-abdominal or abdominal wall abscesses [4, 5].

Cyrany J et al. highlighted that the position of external fixator has an important role; excessive pressure predisposes to necrosis, infection and increased risk of BBS, while insufficient tissue interposition may predispose to peritoneal leak. Since risk of peritoneal leak is highest in the first few days, it has been suggested that firm apposition of the external fixator be maintained just after introduction, with subsequent release within next few days as a measure to minimize the risk of these complications [6].

Several endoscopic and surgical methods have been described as therapeutic measures in the patients with BBS [6]. In our patient we were able to remove the flexible bolster with minimal traction, however such an attempt may lead to risk of peritoneal leak, especially in a newly

placed PEG, where the tract is immature and tissues are poorly interposed, hence we do not recommend it as modality to manage BBS.

To conclude, although PEG is usually a safe procedure, it is known to have complications, occasionally severe, hence utmost caution must be exercised during placement and follow up care of PEG to avoid complications and to manage them appropriately at an early stage.

Conflict of interest:	All authors declare no COI
Ethics:	There is no ethical violation as it is based on voluntary anonymous interviews
Funding:	No external funding
Guarantor:	Dr. Ankur Gupta will act as guarantor of this article.

References

1. Boyd JW, DeLegge MH, Shamburek RD, Kirby DF. The buried bumper syndrome: A new technique for safe, endoscopic PEG removal. *Gastrointest Endosc* 1995; 41: 508-511.
2. Khalil Q, Kibria R, Akram S. Acute buried bumper syndrome. *South Med J* 2010; 103: 1256-1258.
3. Schwartz HI, Goldberg RI, Barkin JS, Phillips RS, Land A, Hecht M. PEG feeding tube migration impaction in the abdominal wall. *Gastrointest Endosc* 1989; 35: 134.
4. Finocchiaro C, Galletti R, Rovera G, Ferrari A, Todros L, Vuolo A, Balzola F. Percutaneous endoscopic gastrostomy: a long-term follow-up. *Nutrition* 1997; 13: 520-523.
5. Johnson T, Velez KA, Zhan E. Buried bumper syndrome causing rectus abdomen is necrosis in a man with tetraplegia. *Spinal Cord* 2010; 48: 85-86.
6. Cyrany J, Rejchrt S, Kopacova M, Bures J. Buried bumper syndrome: A complication of percutaneous endoscopic gastrostomy. *World J Gastroenterol.* 2016 Jan 14; 22 (2):618-27.

