

The advantage of retrieval PEG tubes in patients with buried bumper syndrome - A case report

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The aging population has resulted in an increasing need for long-term enteral nutrition of patients with a wide range of disabling conditions. Percutaneous endoscopic gastrostomy is one of the applicable methods for long-term enteral nutrition support. The buried bumper syndrome is a rarely encountered but grave complication of percutaneous endoscopic gastrostomy. Various internal and external methods have been described for the removal of the buried bumper. Removing the percutaneous endoscopic gastrostomy tube by external traction without an abdominal incision can resolve this problem efficiently, especially in cases in whom retrieval-type percutaneous endoscopic gastrostomy tubes have been used. We report a case of buried bumper syndrome as a late complication of percutaneous endoscopic gastrostomy placement. We removed the buried bumper with external traction and placed a new percutaneous endoscopic gastrostomy tube in a different site because of the peristomal infection.

Key words: Percutaneous endoscopic gastrostomy, buried bumper syndrome, retrieval tube

Buried bumper sendromu'nda retrieval tip perkütanöz endoskopik gastrostomi tüpünün avantajı

Nüfusun yaşlanmasıyla birlikte debilizan hastalıklarla daha sık karşılaşmakta ve bu yüzden uzun süreli enteral beslenme ihtiyacı artmaktadır. Uzun süreli beslenme desteği için uygulanabilir metodlardan birisi perkütan endoskopik gastrostomidir. Buried bumper sendromu perkütan endoskopik gastrostomi uygulamasının nadir görülen ancak çok ciddi bir komplikasyondur. Buried bumper çıkarılması için değişik dahili ve harici yöntemler tanımlanmıştır. Özellikle retrieval tip perkütan endoskopik gastrostomi tüplerinin kullanılmış olduğu olgularda, perkütan endoskopik gastrostomi tüpünün abdominal insizyon yapmaksızın eksternal traksiyon yöntemiyle çıkarılması bu problemi etkin bir şekilde çözümleyebilir. Bu makalede, perkütan endoskopik gastrostomi uygulamasının geç komplikasyonu olarak buried bumper sendromu gelişen bir olguyu sunuyoruz. Bu olguda buried bumper eksternal traksiyon yöntemiyle çıkarılmış ve ardından peristomal enfeksiyon nedeniyle başka bir lokalizasyondan yeni bir perkütan endoskopik gastrostomi tüpü yerleştirilmiştir.

Anahtar kelimeler: Perkütan endoskopik gastrostomi, buried bumper sendromu, retrieval tüp

INTRODUCTION

Percutaneous endoscopic gastrostomy (PEG), the procedure of choice for long-term enteral access, was first described in 1980 by Ponsky and Gaude-
rer (1,2). It is safe and easy to perform, and has a low mortality and complication rate (1).

Buried bumper syndrome (BBS) is a rarely encountered, unusual complication of PEG and was first described by Klein et al. in 1990 (3). It is thought to arise from excessive tension between the

internal and external bumpers, causing ischemic necrosis (4).

CASE REPORT

A 76-year-old female with a history of thromboembolic cerebrovascular accident was fed for two years without complication via Flexiflo-Inverta-PEG (20Fr, Abbott Laboratory, Columbus, OH, USA). She was admitted with a blockage of her gastros-

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tomy tube, difficulty in infusing feeding formula, and peristomal hyperemia and pain. On physical examination, the stoma site seemed to be inflamed. Endoscopically, we were unable to visualize the internal bumper. Endoscopy demonstrated dimpling of the gastric mucosa on the anterior wall of the stomach (Figure 1). Abdominal computed tomography (CT) revealed the bumper to be buried in the gastric wall (Figure 2). According to these findings, a diagnosis of BBS was established. The tube was removed by external traction without an abdominal incision, and a different site was used for the successful insertion of a new PEG tube by pull technique. Intravenous cephazolin sodium treatment was administered for peristomal infection. The original tract had completely obliterated in 14 days.

DISCUSSION

Buried bumper syndrome (BBS) is reported as an unusual complication of PEG insertion in which the internal bumper becomes embedded in the gastric or abdominal wall, causing feeding problems, peristomal leakage, pain, and swelling (3).

A buried bumper, if left in place, can cause grave complications such as perforation of the stomach, peritonitis and death (5).

The methods of treatment include endoscopic removal of the PEG tube (3,6), surgical removal (7), or external traction without an abdominal incision (8). Depending on the clinical scenario, a replacement tube can be inserted through the same tract (9); however, in patients with an abdominal abscess, it may not be suitable to place the replacement tube through the same tract. In such cases, it is recommended to delay the procedure, administer antibiotics and wound care, and let the original site heal before replacing the PEG or locating a different site (10).

In most cases, BBS can be prevented with proper education of the patient and caregiver. It is prudent to allow for an additional 1.5 cm between the external bumper of the PEG tube and the skin in order to minimize pressure necrosis. Additional



Figure 1. Endoscopic view of the anterior wall of the stomach showing dimpling of the gastric mucosa.



Figure 2. Abdominal computed tomography revealed the bumper buried in the gastric wall.

measures include regular cleaning and examination of the external PEG site, pushing in and rotating of the tube before repositioning of the external bumper, avoiding unnecessary external tube traction, and monitoring the external length of the tube (10).

In conclusion, removing the PEG tube by external traction without an abdominal incision can resolve BBS efficiently, especially in cases in whom retrieval-type PEG tubes have been used.

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