INTRODUCTION

Percutaneous endoscopic gastrostomy (PEG) has become the modality of choice for providing enteral access to patients who require long-term enteral nutrition. It is estimated that 160,000-200,000 PEG procedures are performed each year in the United States; this makes PEG the second leading indication for upper gastrointestinal tract endoscopy [1]. Although generally considered safe, PEG tube placement can be associated with many potential complications. Most series report morbidity rates ranging from 9% to 17%, although major complications occur in only 1%-3% of cases [2-3]. Buried bumper syndrome (BBS) as well as ulcers or gastrointestinal bleeding are uncommon but generally late and serious complications of PEG [4]. We report two cases illustrating these two complications.

CASE REPORTS

Case 1

A subconscious 75-year-old man with cerebrovascular stroke had a percutaneous endoscopic gastrostomy (PEG) for enteral nutrition. Two months after he left hospital, he was transferred to the emergency department because of a fever at 39°C and a deteriorated conscious state. Two days
before, his wife noted difficulties in feeding him with the gastrostomy tube. Abdominal examination revealed peri-gastrostomy tenderness with a renitent mass in the right upper quadrant. Abdominal CT scan showed the internal button of the gastrostomy tube having migrated into the abdominal wall along with a diffuse non constituted abscess (Figure 1). The extraction of the button after a tiny abdominal incision and an antibiotic treatment led to the resolution of the abdominal wall infection. Meanwhile the patient was fed with a nasogastric tube.

**Case 2**

A 14-year-old young man with juvenile dermatomyositis and dysphagia had a percutaneous endoscopic gastrostomy (PEG) for enteral nutrition. One month later he developed aspiration pneumonia so the button of the gastrostomy tube was pushed into the post bulbar region as described by Boujaoude et al. [5]. Six months later the patient presented to the emergency department for upper gastrointestinal bleeding. Upper endoscopy showed oozing of blood from beneath the button of the gastrostomy tube in the post bulbar region with bad visibility. The button was retrieved to the stomach and an abdominal CT scan was performed (Figure 2). It revealed a periduodenal collection with a pneumoperitoneum. A conserva-

tive treatment with antibiotics, parenteral nutrition and gastric suction was adopted with good results. One month later, an upper endoscopy showed the post-bulbar ulcer about to heal (Figure 3).

**DISCUSSION**

Currently, PEG is frequently performed for those patients who need a medium and mainly long-term enteral nutrition, especially at home. However, persons taking care of these patients must be aware of the complications related to this technique. Buried bumper syndrome (BBS) is an uncommon complication of PEG, occurring in 1.5% to 1.9% of patients, in which the internal bumper migrates from the gastric lumen and becomes lodged in the gastric wall along the gastrostomy tract [6]. It often manifests months to years after PEG placement (median duration was 35 months after PEG placement) [4]. It is probably a consequence of enforced tightening of the PEG tube causing an ulcer in the gastric mucosa and external migration. The inability to infuse feeding solution through the tube, to advance, withdraw, or rotate the tube, leakage around the tube and abdominal pain are the most common manifestations of BBS [7]. Treatment involves removing the tube (which may require upper endoscopy), allowing the tract to close while an alternative method of feeding is established, and then placing a new PEG tube in a different location [8].

Hemorrhage occurs in up to 2.5% of PEG placements [9]. The most common cause of hemorrhage post-PEG is due to ulcer formation. It’s usually the result of the necrosis caused by the internal bumper pressure on the digestive mucosa [10]. In a retrospective study including patients with gastric ulcers detected on gastric endoscopy after PEG tube placement, they studied the occurrence of ulcers in relation to the length of the protrusion from the
PEG tubes intragastric bumper and the use of histamine H 2-receptor antagonists. Seven of the 21 patients (33.3%) who had a PEG tube with a long protrusion from the intragastric bumper developed gastric ulcer. By contrast, only two of the 71 patients (2.8%) who had a PEG tube with a short protrusion developed gastric ulcer. The use of H 2-blockers had no significant impact on the development of gastric ulcer [10]. Jejunal perforation is reported as a major complication of jejunal feeding tube and it is believed to be due to pressure necrosis [12]. There is no data concerning the long-term follow-up of patients who had the button of the gastrostomy tube pushed into the postbulbar region. It’s the first complication reported with this technique. We think in our case, ulcer perforation was probably due to the internal disk rubbing on the duodenal wall with the underlined illness contributing to the development of this complication.

CONCLUSION

These two cases illustrate two potential complications of percutaneous endoscopic gastrostomy/jejunostomy techniques. Persons taking care of patients with PEG tube must be aware of these potential complications. Verifying the position of the tube must be systematic before feeding and in case of development of abdominal pain or any sign of gastrointestinal hemorrhage prompt medical advice should be taken urgently.

REFERENCES


هرجع بالاتجهين

موجز - يعتبر وضع المعدة عبر الجلد الطريقة المختارة للاطعام الباطني ولادة طويلة وهي تنمية سببية نوعا ما وبدون أي خطر ولكن قد يحترق بها اختلاط كامنة. الوصف - حيث اختلاط مختلف بين المعدة بالمنظير الباطني عند مريضين كان إطعامهما بغذاء المعدة 05 عاما وشابة عمرها 1 دخال قسم الطوارئ ولختلاط مختلفين لعلاقتهما بوضع المعدة بالمنظير الباطني، إحدى الأول الصورة التالية: حس مع تأثير الوعي بسبب كون خراج جدار البطن تأليبا للعمرة الأكرة الداخلية للمنظورة البطن المدعى، مع جدار البطن، وعولج بالمضادات الحيوية بعد سحب المنظورة. والتري دهام نزف هام عاوميا انتقال معاوي بسبب احتكاك الأكرة الباطني. وعولج الانتشار والنزف بيطريه مrelsفلة وكانت نتائج حسن.

الخلاصة - يجب على المغذي بالاطعام الاعترافي له وضع المعدة بالمنظير الباطني الابتعاد الى الاختلاط الكامنة لطريقة الاطعام: يجب التحقق من الوضوحه ونفاذية المنظورة قبل الاطعام وتتوجه استشارة طبية قبل أي علامة مظلمة ومتّردة بالخطر.