

Long-term enteral nutrition by percutaneous endoscopic gastrostomy

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Abstract

Long term enteral nutrition requires an access which provides comfort and efficacy. The development of percutaneous endoscopic gastrostomy has been of particular value to patients with mechanical problems of swallowing such as this one with a

pharyngostomy after resection of a pharyngeal neoplasia.

Key words: pharyngeal tumor, enteral nutrition, percutaneous endoscopic gastrostomy.

Introduction

Nutrition via the digestive tract is recognized as the main physiological route. When the patient is unable to feed independently, but has a functioning gastrointestinal tract, an enteral feeding tube is the preferred alternative route for administering nutrients.^{1,2} The most common form involves the insertion of a nasogastric/enteral tube; in rarer cases, the tube can be inserted through a surgical opening in the abdominal wall, stomach or jejunum (surgical gastrostomy or jejunostomy, respectively)³. A simplified gastrostomy technique - percutaneous endoscopic gastrostomy (PEG) - developed in the 1980s, enables the insertion of a percutaneous gastrostomy tube under endoscopic control and local anesthetic. Its use in some patients indicated for enteral nutrition, particularly for long periods, represents a significant improvement in quality of life, which was evident in our case.

Case report

In September 1993, E.F, male, 56, underwent pharyngectomy due to a neoplasm of the pharynx. The surgery was considered curative, but the patient re-

mained with tracheostomy and pharyngostomy. This situation was preventing oral feeding, so a nasogastric tube was inserted, through which the patient fed himself, at home, with some liquidized, normal foods.

In May 1994, the doctors asked the Nutrition Group of Santa Maria Hospital to evaluate the patient. A regular state of nutrition was observed; weight 62 kg, height 1.68 m, and body mass index 22 kg/m² (lower limit of normal). The patient was depressed, having had a nasogastric tube for nine months, and refused to go out of his home because of it. Percutaneous endoscopic gastrostomy (PEG) was suggested, which was immediately accepted by the patient; the PEG was inserted on 26/5/94. The pull technique was used, with a Ponsky Pull PEG Tray, Bard de Espana, SA, with a 48-hour hospitalization time. The antibiotic cephadrine was administered: 1 g IV 6/6 hours for 3 days, starting 2 hours prior to the insertion of the PEG. The insertion was performed with local anesthesia of the abdominal wall, under sedation with 5 mg of flurazepam IV, and there were no immediate or subsequent complications. The patient started PEG feeding 24 hours after its insertion, receiving, for the first 3 days, only a liquid, polymeric, chemical diet with complete protein concentration of 1 kcal/mL, administered in continuous drip for 16 hours, with a break at night. Later, during the first month, the patient received 500 cc/day of supplement of the same diet, in addition to liquidized normal food prepared at home. This was the only food, given through the PEG with a syringe as "regular meals" from the first month. At three months, the weight, which had been stable, increased by 3 Kg. The patient lived alone and was independent in terms of preparation and administration of food and care of the gastrostomy. He began to have

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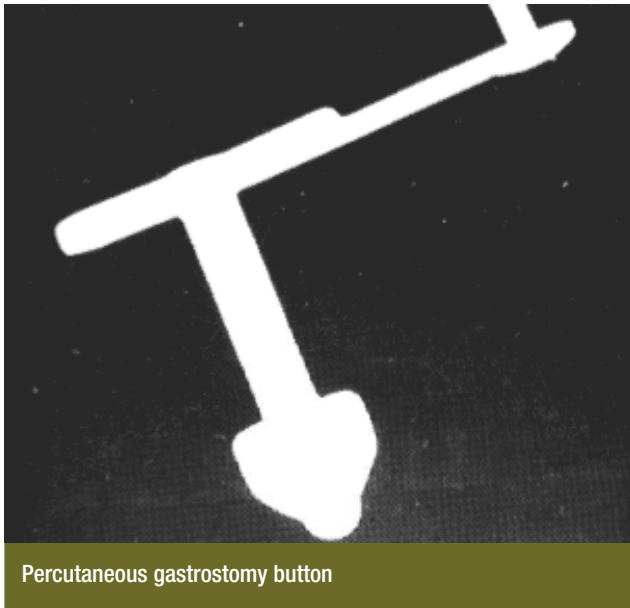
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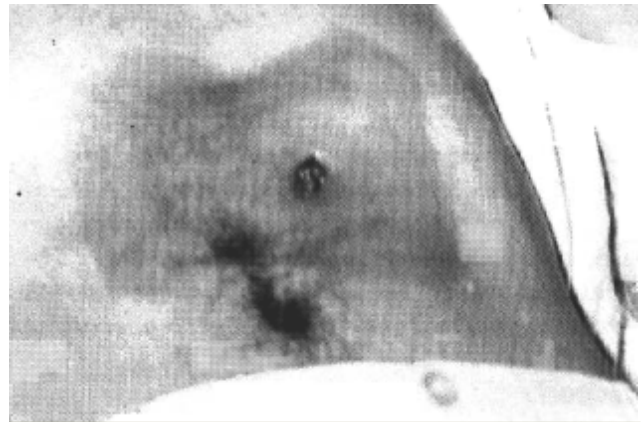
Percutaneous gastrostomy button

FIG. 1

a normal social life and from the first days, showed a rapid and obvious improvement in mood, activity, well-being and quality of life. In February 1995, the gastrostomy tube (PEG) showed signs of deterioration and was replaced by a gastrostomy button (Fig. 1); the replacement was performed without anesthesia or sedation, without complications, and without any interruption or modification to the diet. In July 1995, reconstructive surgery in ENT was possible, the pharyngostomy was closed, and the patient began to eat only orally, three days after surgery. Fifteen days later, once the clinical condition had stabilized, the gastrostomy button was removed without the need for sedation. After 24 hours without ingesting food, once the "fistulous" route giving access to the PEG button had closed (Fig. 2), the patient resumed oral feeding and was discharged without complications. The patient was feeling well in July 1996.

Discussion

Enteral nutrition, like other forms of artificial nutrition, presupposes an individualized and thorough evaluation of the patient's clinical condition, in order to plan the access route, and the needs for and types of nutrients to be administered.^{1,5} This decision process is particularly important when enteral nutrition is to be done at home over a medium- to long-term period.^{3,5,6} The main indications come from the im-



Appearance of the scar from the percutaneous gastrostomy, 24 hours after the tube has been removed.

FIG. 2

possibility of swallowing, neurological diseases and neoplasms, as in the case presented here. In these circumstances, the use of a small-diameter nasogastric tube may be indicated, but it is rarely used in Portugal, particularly if intermittent or short/medium periods of enteral nutrition are expected.¹⁻³ This was not the case with the patient presented, for whom long-term enteral feeding was predicted. Thus, the patient could have benefited for an additional ten months with earlier insertion of PEG immediately after surgery. While in terms of traditional medical evaluation, the patient suffered no organic complications associated with the wide-diameter nasogastric tube (the only tube that allows the ingestion of normal foods), it cannot be denied that it was only after changing to the PEG that the patient resumed his normal life and relationships, an improvement that cannot be attributed merely to the slight nutritional gains after changing to PEG. The PEG provided a significant improvement in the patient's quality of life for about one year that was attributable solely to the change in enteral feeding access route. Otherwise, his case was according to the literature.^{3,7} Thus, the justification used by health professionals for not prescribing PEG, claiming it is too aggressive for patients, is unfounded. In fact, this method is well-accepted when its potential advantages are justified, and it is technically easy and quick to insert (taking 15 to 30 minutes) when performed by an experienced endoscopist, with a commercially available kit. The Nutrition Group of

the HSM has been using the trans-oral pull technique⁴ for the insertion of PEG, in the Endoscopy Room of the Techniques Unit, under only local anesthetic. The same group adheres to specific follow-up times in relation to teaching principals of care for the tube and the nutritional diet, enabling the early use of normal foods and, therefore, greater savings.^{3,6-8} To date, we have not seen any complications arising from the insertion of PEG, except for inflammation and transient, self-limiting local inflammatory reactions. There were no complications even when, as in this case, we replaced the tube with a gastrostomy button, or when we removed this nutrition route once the patient was able to effectively resume oral feeding. Compared with surgical gastrostomy or nasogastric tube, long-term enteral feeding by PEG is more cost effective, but none of the techniques are free of complications.^{3,5,7,8}

As exemplified in this clinical case, long-term enteral nutrition by PEG is a simple and safe technique, when performed by a multidisciplinary group, and is well-accepted by patients, when they are fully informed.^{3,7,8} ■

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