

# PERCUTANEOUS ENDOSCOPIC GASTROSTOMY IN THE ADULT PATIENT - A LOCAL CASE REPORT

E K W Sim, P M Y Goh, J R Isaac

## ABSTRACT

Patients who require a gastrostomy tube placement have traditionally been subjected to various open surgical methods requiring laparotomy. Since it was first described Percutaneous Endoscopic Gastrostomy (PEG) has rapidly become the preferred method for gastrostomy tube placement.

We present a case report to illustrate the simplicity and elegance of the technique in a patient with bulbar palsy.

**Keywords:** Percutaneous Endoscopic Gastrostomy, Bulbar Palsy

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## INTRODUCTION

Percutaneous Endoscopic Gastrostomy (PEG) is rapidly becoming the preferred method for gastrostomy tube placement.

Patients who require a gastrostomy tube placement have traditionally been subjected to various open surgical methods requiring laparotomy. Since it was first described (1,2) the percutaneous method employing a flexible endoscope and local anaesthesia is fast growing in popularity.

The indications remain similar to those for conventional gastrostomy, such as in patients who are unable to swallow or feed themselves in advance head and neck cancers, altered mentation, CNS dysfunction or peripheral nerve dysfunction. Less commonly they may be indicated in patients who require decompression or drainage such as in chronic intestinal obstruction.

The method as described by Gauderer and Ponsky is currently the most popular(1,2). The alternative Sachs-Vine(3), Russells technique(4) and other modifications have also been successfully used.

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Department of Surgery  
National University Hospital  
Lower Kent Ridge Road  
Singapore 0511

E K W Sim, MBBS, FRCS(Edin), FRCS(Glas)  
Registrar

P M Y Goh, MBBS, M Med(Surg) (S'pore), FRCS(Edin),  
FRCS(Glas)  
Senior Lecturer

J R Isaac, MBBS, M Med (Surg) (S'pore), FRCS(Glas),  
FRCS(Edin)  
Lecturer

Correspondence to: Dr E K W Sim

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## TECHNIQUE

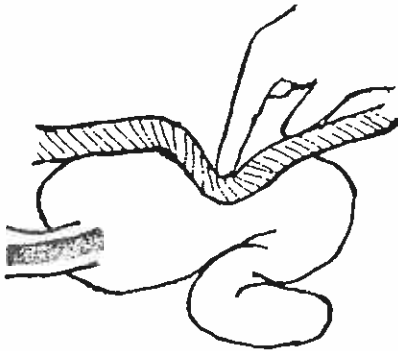
The Ponsky Gauderer technique has been well described(1,2). The patient is endoscoped in the supine position. Panendoscopy is rapidly performed and the appropriate position for the gastrostomy is determined. The stomach is inflated, the illumination light at the tip of the endoscope is used to identify the position of the scope by locating the point of the maximum intensity on the anterior abdominal wall. This is palpated with a fingertip and the position confirmed by observing an area of indentation through the endoscope (Fig 1). The site is usually superior to the incisura angularis on the anterior wall of the stomach. This skin is then infiltrated with 1% Lignocaine with a 25 gauge needle which is advanced into the stomach until air can be aspirated. This needle is observed through the endoscope ensuring correct placement. A small 3/4 cm cutaneous incision is made with a size 15 blade. Penetration of the peritonium is avoided. A 16-gauge Medicut catheter is inserted through the incision and into the inflated stomach under endoscopic vision. The metal stylet is removed and a no. 2, 150-cm silk suture is then passed through the catheter sheath into the stomach (Fig 2). A snare, previously introduced through the endoscope and surrounding the catheter, is used to grasp the suture. Both the suture and endoscope are withdrawn through the patient's mouth (Fig 3). The 16 F mushroom tip catheter device is then tied to the string exiting the mouth and is generously lubricated. Traction is applied to the silk suture which exits the abdomen (Fig 4). The catheter is pulled downward in a retrograde fashion into the oropharynx, the stomach, and out through the abdominal wall. The endoscope is then reinserted as the mushroom of the gastrostomy device is pulled firm against the gastric wall under direct vision (Fig 5). The outer rubber bumper is then positioned externally to hold the stomach in apposition to the abdominal wall.

## CASE REPORT

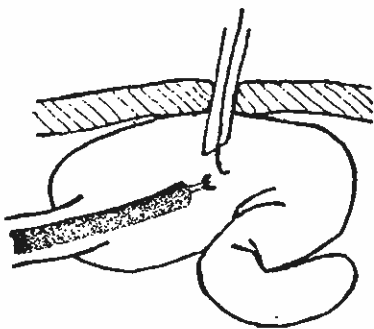
A 47 year old Chinese male had a cerebrovascular accident resulting in bulbar palsy. He had difficulty in

swallowing and required nasogastric feeding.

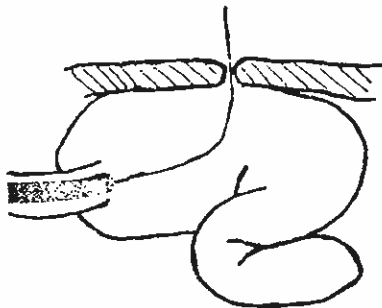
**Fig 1**  
Steps in Endoscopic Gastrostomy



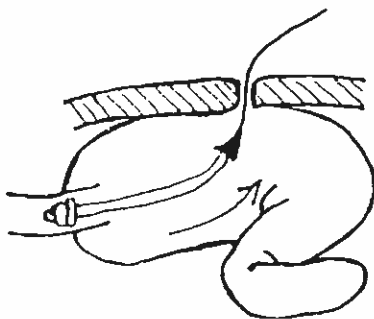
**Fig 2**



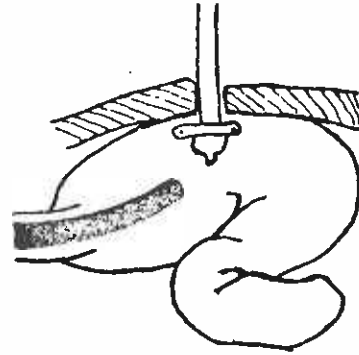
**Fig 3**



**Fig 4**



**Fig 5**



The Ponsky Gauderer technique as previously described was used to insert a feeding gastrostomy tube. No complications were encountered. Gastrostomy feeding was started 24 hours after the procedure. Six months later the patient recovered the ability to swallow and the gastrostomy tube was removed endoscopically as an outpatient procedure.

#### DISCUSSION

Percutaneous endoscopic gastrostomy tube placement problems may occur for several reasons. The scope may not be passable because of an obstructing tumour; this may be overcome by the use of a paediatric endoscope or by oesophageal dilatation or with the aid of laser fulguration. In some patients the light may not be visible through the abdominal wall due to a thickened stomach wall, massive ascites or a very thick abdominal wall as in extreme obesity. Previous gastric surgery may also make placement difficult.

Possible post-operative complications include necrosis at the gastrostomy site, leakage, dislodgement and migration of the tube. Bleeding is occasionally encountered. Infectious complications are common and may be serious. Ponsky has suggested that the routine use of pre operative antibiotics may reduce the infection rate. Overall morbidity reported by Ponsky et al was 10% (5). However a subsequent paper(6) reported a 5.9% morbidity with 0.3% procedure-related mortality rate. Other authors report from 0 to 42% morbidity rate (7-9).

Studies comparing PEG to open gastrostomy indicate that the operating time is shorter for PEG. The overall cost is less and the average time after placement for feeding is shorter(10). In addition, the incidence of aspiration pneumonia, wound infection and mortality are also significantly lower in the PEG group.

#### CONCLUSION

The low morbidity associated with PEG placement together with the simplicity and elegance of the technique makes it the preferred method for most cases of gastrostomy placement.

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