Since Gauderer et al described percutaneous endoscopic gastrostomy (PEG) in 1980, PEG has been widely accepted as the preferred route for gastrostomy in infants and children who require long-term enteral feeding. Compared with surgical gastrostomy, PEG is relatively noninvasive and more cost-effective compared with surgical gastrostomy. Surgical gastrostomy is generally reserved for patients with anatomical anomalies, esophageal stricture, previous extensive abdominal surgeries, or severe gastrointestinal reflux requiring fundoplication and/or pyloroplasty. The main indication for performing PEG is to provide enteral nutrition and medication for children who have neurological impairment, metabolic disorders, oncological diagnoses, or gastrointestinal disorders.1 The use of gastrostomy tube feeding has previously been shown to increase weight, improve overall health, and decrease feeding times for such children. It has also demonstrated a significant, measurable improvement to the quality of life of caregivers.

In this issue of Pediatrics and Neonatology, Wu et al2 reported the long-term outcomes of 83 children who underwent PEG placement and documented catch-up growth in these children. Nevertheless, complications that include stoma infection, perforation, bleeding, tube migration/dislocation, gastrocutaneous fistulas, and intestinal obstruction may follow after gastrostomy placement3 (Table 1). Buried bumper is a rare complication of percutaneous gastrostomy. Inadequate postoperative care without appropriate mobilization is a factor leading to this preventable complication. Endoscopic removal is possible, failing which laparoscopic surgery should be considered. In addition, development or worsening of gastroesophageal reflux in neurologically impaired children with gastrostomies has also been widely reported, and it was considered to be one of the long-term sequelae of gastrostomy placement. Rescue therapies for these patients consist of antireflux medications, fundoplication, and jejunal tube feeding. There remains considerable uncertainty regarding the optimal treatment. Uncontrolled studies of proton pump inhibitors have reported high levels of tolerability and efficacy suggesting high rates of healing, symptom relief, and reduction of vomiting in up to 90% of participants.4,5 Selective 5HT4 gastroprokinetic agents such as Mosapride have also been demonstrated to be effective regarding gastric motility, although an appropriate pediatric dosage has not yet been established. Furthermore, jejunal feeding access can be obtained via the gastrostomy to relieve reflux but must be delivered continuously from 12 hours to 24 hours a day. Children with severe anoxic brain injury and body deformity appear to have the greatest risk of complicated reflux. Those who do not respond well to medical therapies and jejunal feeding may require the surgical fundoplication of the gastroesophageal junction and/or pyloroplasty. There is a need for robust scientific evidence in order to provide data on the comparable risks or benefits of these interventions.6 The hesitation of parents related to the decision of having a gastrointestinal tube placed in their child and the ethical issues related to placement of PEG tubes for nutritional support in patients with perceived poor quality of life are complex, and therefore, the decision regarding PEG tube placement and the provision of artificial nutritional support for patients should be based on consensus regarding outcomes, treatment goals, and patient/family preferences.7
References


