



are addressed succinctly in the joint ASGE and American College of Gastroenterology document

Whichever technique is used, the trainee must be made familiar with the contents of the particular kit, so that the procedure may proceed efficiently and safely. Trainers should emphasize the importance of a proper endoscopic examination prior to placement of the gastrostomy tube itself. This should include evaluation for gastric outlet obstruction, evidence of gastric dysmotility, postoperative anatomy, and gastric ulcer or malignancy, which may alter the decision to place the gastrostomy tube.

Techniques used to identify a safe percutaneous site for PEG placement also must be mastered by the trainee, with emphasis on the importance of one-to-one finger indentation and transillumination in assessing any potential site. The trainee should use the "safe tract" syringe aspiration technique during abdominal wall penetration. This involves applying continuous suction through a fluid-filled syringe attached to the angiocatheter or trocar as it passes through the abdominal wall. If bubbles are seen in the syringe prior to visualizing the trocar in the gastric lumen, the presence of bowel between the abdominal and gastric wall is assumed.

Once the PEG tube has been inserted via the chosen technique, the trainee should be educated specifically on noting the exact location of the external bolster on the PEG tube for ensuring correct positioning of the tube and for future reference. The trainee should be counseled on the pitfalls of improper placement of the external bolster, including buried bumper syndrome (discussed later) and bumper migration with 3(en(u)11.8Oin)16.l.1())-61(ala)1386(trun)16.

of training, recognizing that some programs may not have available expertise or case volume for this procedure.

Endoscopic placement of nasoenteric tubes

asymptomatic), which may present acutely or after several months when PEG tube replacement is required. When the replacement gastrostomy tube is passed through the stoma blindly, it enters the colon rather than tracking to the stomach. Initiation of tube feeds results in diarrhea from colon tube feedings and dehydration. The trainee should be taught that management involves removal of the PEG tube, allowing the stoma to close, and that surgery may be necessary to correct the internal gastrocolic stoma.

Hemorrhage. Hemorrhage and/or ulceration may occur as an adverse event of PEG placement in up to 2.5% of patients. Hemorrhage at the time of PEG placement may be the result of direct puncture of a vessel in the gastric wall or from traumatic erosion and often can be treated with manual pressure. Delayed bleeding may be due to ulceration of the internal bumper into the gastric wall because of excessive tension or ulceration of the opposite gastric wall from chronic irritation from the internal bumper or balloon. Treatment may include standard endoscopic treatment of ulcer base stigmata and PEG removal or repositioning. The trainee should be knowledgeable on the assessment and management of bleeding with respect to enteral access placement. Trainees should be counseled on ensuring optimal coagulation parameters prior to the procedure, including addressing anticoagulant medications.

Peristomal leakage. Leakage around the PEG site is a relatively common problem within the first few days after placement. The trainee must develop the ability to differentiate insignificant PEG leakage from pus reflecting an underlying abscess, feeding solution spillage due to buried bumper syndrome, stool from a gastrocolic stoma, or excessive gastric fluid or feedings related to gastric outlet obstruction or severe dysmotility. A careful examination of the PEG site is always warranted, and frequently upper endoscopy is helpful to confirm buried bumper syndrome, gastric outlet obstruction, gastric ulceration, or other pathology. The trainee should be aware that treatment may include management of comorbidities, loosening of the external bolster, and local measures aimed at preventing skin breakdown. Additionally, the trainee should be taught that placement of a large PEG tube will not solve the problem and may serve to distend the tract further. The trainee must realize that there are instances in persistent peristomal leakage that the PEG tube will need to be fully removed and a new PEG tube placed at a different site.

Clogged tubes. Tube dysfunction because of clogging is one of the most common problems with PEG tubes. Smaller caliber tubes such as NG tubes are more likely to clog.

Patient care

Trainees must be able to provide patient care that is appropriate, effective, and compassionate. This includes taking a history and performing a comprehensive and accurate physical examination to ensure proper patient selection for enteral access placement. The ability to formulate a plan for management and follow-up is critical. Trainees should be able to present the results of each consultation orally and in writing and to defend any recommendations. Expertise in providing informed consent for enteral feeding tube placement is essential.

Medical knowledge

Trainees must demonstrate a core fund of knowledge in the indications, contraindications, and alternatives to enteral feeding tube placement. Trainees must be able to demonstrate an analytic approach and use appropriate investigations, including the practice of evidence-based medicine to support their decision making with regard to enteral feeding.

Interpersonal and communication skills

Trainees must be able to demonstrate interpersonal and communication skills that result in effective information exchange with their patients, families, and other health care professionals. This would include, but is not limited to, verbal and written communication as a consultant. Effective communication skills in reviewing the risks, benefits, and alternatives of the various enteral feeding options with patients and their families are essential for the informed consent process. Endoscopic reports should be accurate and timely, describing in detail how the procedure was performed. Trainees must be able to work effectively as members and leaders of the health care team.

Professionalism

Trainees must understand and be committed to all elements of professionalism, including respect, compassion, and integrity toward patients and their families and toward other health care professionals. Trainees must demonstrate ethical behavior, responsiveness, and sensitivity to a diverse sex, ethnic, socioeconomic, and an aging patient population.

Practice-based learning and improvement

Trainees must be able to investigate, evaluate, and improve their patient care practices by analyzing and assimilating both scientific evidence as well as their

