VANDERBILT UNIVERSITY
MEDICAL CENTER

Acute Care Surgery

Practice Management Guideline: Percutaneous Endoscopic Gastrostomy (PEG) Tube

I. **Background:** Percutaneous endoscopic gastrostomy (PEG) is a commonly performed procedure that provides durable enteral access for feeding and medications. This document outlines patient selection and perioperative considerations for patients undergoing PEG tube placement.

II. **Guideline:**

A. **Patient Selection/Preoperative Care**

a. Contraindications to PEG Placement
   i. Anatomic inability to place PEG (e.g. Roux-en-Y anatomy, mesh overlying PEG site, esophageal stricture)
   ii. Uncontrolled agitation (including any patient requiring arm restraints or sitter for agitation in prior 48 hours)
   iii. Ascites
   iv. Severe Dementia
   v. Anorexia Nervosa

b. Special Situations for PEG Placement
   i. Esophageal cancer: discuss with Thoracic Surgery to ensure no plans for esophagectomy with gastric conduit
   ii. Failure to thrive: will perform if there is a medically reversible cause
   iii. Palliative Decompression: In the setting of unresectable malignancy
   iv. Peritoneal Dialysis (PD): Patients must be on hemodialysis for 6 weeks prior to PEG and wait at least 4 weeks to go back to PD
   v. Ventriculoperitoneal (VP) shunt: VP shunt and PEG placement should be separated by 7 days to reduce risk of infectious complications
   vi. Amyotrophic Lateral Sclerosis (ALS) *without* tracheostomy: Interventional Radiology (IR)-placed gastrostomy preferred to PEG given the anesthesia risk in this population
   vii. Active chemotherapy
      1. Risk/benefit discussion of immediate vs. delayed PEG
      2. Contraindicated during severe leukopenia (WBC <2.5 or ANC 0.5) or thrombocytopenia (<50)
   viii. Immunosuppressants/Corticosteroids
      1. Risk/benefit discussion of immediate vs. Delayed PEG with medical oncology team
      2. Contraindicated during induction dose
      3. If plans to stop steroids, delay until no longer on steroids
      4. If no plans to stop steroids, delay until on maintenance/long term dose

c. Anticoagulation Hold Times
   i. Heparin drip: Hold 4 hours prior to and 4 hours after procedure
   ii. Prophylactic dose enoxaparin or heparin: do not hold
   iii. Therapeutic enoxaparin: hold morning dose, restart evening dose if no bleeding
   iv. Direct Oral Anticoagulants (DOAC): Hold 24 hours prior to PEG, restart evening dose if no bleeding
   v. Aspirin: Do not hold

vi. Clopidogrel/Ticagrelor/Effient (without addition of aspirin): Do not hold
vii. Dual Antiplatelet Therapy (DAPT)
1. If able, continue aspirin, hold second agent for 5 days, restart day of procedure
2. If unable to hold DAPT (i.e. recent stent), risk/benefit discussion regarding delaying PEG vs. PEG on DAPT

d. Preoperative Tube Feeds and Diet
i. Bedside procedures (in ICU)
1. Protected airway (cuffed tracheostomy or endotracheal tube): hold feeds minimum of one hour. *This includes patients undergoing percutaneous tracheostomy at the same time.*
2. Unprotected airway: Hold tube feeds/solid foods minimum of 6 hours, clear liquids 2 hours
ii. Operating room procedures:
1. Hold tube feeds and diet at midnight the night prior. For patients at high nutritional risk hold solid foods/tube feeds minimum 6 hours, clear liquids minimum 2 hours.

B. Procedural Care

a. Follow bedside surgery protocol for sterile precautions, informed consent, sedation, and preoperative timeout
b. Equipment: Refer to **Appendix A**
c. Antibiotics: Weight-based Cefazolin given within 1 hour of incision
d. Indications for T-fasteners:
i. Corticosteroids
ii. Chemotherapy
iii. Immunosuppressants
iv. Attending discretion

C. Postoperative Care

a. Postoperative PEG Care
i. PEG to gravity drainage (foley bag) x 4 hours
ii. Tube feeds and medications started after 4 hours
iii. Patients are followed with a post-op check and note and a POD1 visit and note with depth documented
iv. Those who are higher risk or have additional identified issues should continue to be followed
v. T fasteners removed at 2-3 weeks unless causing skin necrosis
vi. Post-discharge PEG appointment made for 4 weeks following placement
vii. Dislodged PEG should have urgent EGS evaluation

b. Bedside Nursing Care: **Appendix B**

c. Dislodged PEG/Gastrostomy Tube
i. Dislodged tube within 30 days should have emergent EGS consult/evaluation
ii. Peritonitis, free fluid or air, hemodynamic changes, abdominal wall infection necessitate consideration of exploration
iii. If no peritonitis, attempt replacement with balloon gastrostomy tube, confirm replacement with either X-ray tube study or IV and per-tube contrasted CT scan
iv. Consider repeat PEG in patients without evidence of peritonitis or abdominal wall infection

d. PEG Removal
i. PEG should not be removed for a *minimum of 4 weeks* post-placement

ii. PEG Removal Criteria:
   1. Initial pathology improved (i.e. cleared by SLP for PO diet)
   2. All food should be taken PO only for 2 weeks
   3. Patient's weight stable on PO diet
   4. Tolerating multiple consistencies of foods, good appetite, not overly reliant on supplements
   5. No pending surgery or radiation planned

iii. High dose PPI may be used to facilitate gastrocutaneous fistula closure

III. References

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IV. Authors

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Appendix A: Procedural Equipment Needed for PEG

1. Trauma procedure cart
2. Sterile towels
3. Bite Block
4. Sterile Gown and Gloves
5. Eye Protection
6. Scope
    - Pediatric Colonoscope for PEG-J
    - Pediatric XP scope for restricted esophagus
7. 1-liter bottle normal saline
8. Endoscopy connector set
9. Suction Tubing and Canister
10. Chlorhexidine skin prep
11. PEG or PEG-J kit (If Planning PEG/J T-fasteners are required).

Appendix B: Bedside Gastrostomy Care

1) General care of gastrostomy tube
   i) Record length of the tube where bumper base is located every shift.
   ii) Cleanse site every shift with NS moist gauze to remove crust or drainage.
      (a) If breakdown or macerated skin at the gastrostomy tube entrance site, apply Triple Care EPC and dry gauze daily. Change gauze PRN.
      (b) If no breakdown and skin is intact, apply Triple Care Ointment or Ilex Creamand dry gauze daily.
   iii) Change gauze PRN.
   iv) Flush tube with 30 milliliters of water every 8 hours and PRN after giving medication or feedings per the tube.
   v) Apply abdominal binder or appropriate tape to keep gastrostomy tube from hanging out of patient clothing or to prevent unintended dislodgement of tube.

2) PEG tube feedings, supplements, normal saline, and water are to be given as directed by the attending physician or per nutrition services as directed in the orders.

3) Any dislodged tube or tube with differing tube lengths compared to prior should have tube feeds stopped and EGS team notified