AAST PALLIATIVE CARE COMMITTEE

PEG FEEDING TUBES
A PRIMER FOR SURGEONS

PEG TUBES & THE ACUTE CARE SURGEON

- Introduced in 1980, the percutaneous gastrostomy tube (PEG) has become the standard approach for providing durable enteral access in patients requiring long-term nutritional support
- These patients represent a highly heterogeneous population, encompassing a wide range of diagnoses, illness severities, and trajectories of recovery
- While gastrostomy tube placement can be clearly beneficial for some conditions, determining whether and when to place a PEG is often clinically and ethically complex
- Despite the widespread use of PEG tubes and known complications, there is variable and limited data regarding the true necessity and appropriate timing of PEG placement
- PEG tube placement comes with considerable risks and complications, many of which require additional procedures or general anesthesia events
  - **Minor:** Peristomal leakage, poor wound healing, tube malfunction, infection
  - **Major:** Buried bumper syndrome, tube dislodgement, colonic perforation
- Frequently, the ACS surgeon is consulted for inpatient PEG tube placement
- Controversy arises when PEG tubes are required for indications that are not absolute, including dementia, stroke, and "discharge planning" when facilities require "durable" feeding access
- Additional complexity arises when feeding tubes are placed by other services and ACS surgeons are consulted to manage complications
- For information on PEG tubes for the treatment of malignant bowel obstruction, see the one-pager "Malignant Bowel Obstruction: A Primer for Surgeons"

WHEN TO PLACE A PEG:

- When is enteral feeding indicated?
  - Patients with insufficient oral intake who have a functional GI system and insertion into their alimentary tract can be safely maintained
- The most common referral reasons for PEG tube in today's clinical practice is neurological dysphagia after stroke and dementia and need for permanent feeding access for discharge planning

THE MOST COMMON PATHOLOGIES FOR A PEG CONSULT
(THE PEG CONSULT FOR NEUROLOGICAL DYSPHAGIA)

Dementia

- Nearly 90% of patients with advanced dementia have eating problems
  - Lack of interest in food due to smell and anorexia
  - Apraxia interferes with task of eating
  - Dysphagia and lack of protected airway
- Feeding problems with advanced dementia are associated with a 6 month mortality rate of 25%
- Independent of age, patients with dementia undergoing PEG have a worse prognosis than other patient subgroups
  - 1 month mortality rate 54% after tube insertion
  - 1 year mortality rate 90% after tube insertion
- PEG tube insertion in nursing home residents with advanced dementia is associated with a significant increase in annual inpatient health care costs, in-hospital and ICU stay
- There is no evidence that PEG feeding prolongs survival or provides palliation in patients with dementia, regardless of dementia stage
- Current guidelines from Canadian Geriatrics Society, American Geriatrics Society, and the European Society for Clinical Nutrition and Metabolism all discourage PEG tube placement in individuals with advanced dementia
- Hand-feeding/comfort feeds are viable alternatives
  - Referrals for feeding tube placement in the dementia population warrant goals of care conversations and/or palliative care consultations

Stroke

- The American Heart Association and American Stroke Association provide more specific timing guidance: nasogastric tube (NGT) feeding should be initiated within 7 days for patients unable to safely swallow, with transition to PEG for those anticipated to have prolonged dysphagia exceeding 2-3 weeks
- The FOOD-3 trial found that early PEG placement (before 2-3 weeks) was associated with a 7.8% higher absolute risk of death and poor functional outcome compared to NGT feeding
- The European Society for Clinical Nutrition and Metabolism recommends PEG tube insertion when enteral feeding is anticipated for more than 28 days
  - Oral intake recovers within 30 days in most stroke patients, making immediate invasive PEG placement unnecessary
  - Approximately one-third of patients may still have dysphagia at 1 month, though many improve by hospital discharge
- The Predictive Swallowing Score (PRESS) can supplement clinical judgment in assessing recovery trajectories and informing PEG placement decisions
  - This validated prognostic model incorporates five variables: age, stroke severity (NIHSS), lesion location, initial aspiration risk, and initial oral intake impairment
  - The tool predicts recovery at 7 days (to guide NGT decisions) and 30 days (to guide PEG decisions)
- Rehabilitation remains standard of care for management of neurologic dysphagia.
  - While NGT/dobhoff tubes have been shown to have increased rates of dislodgement compared to PEG tubes, bridled dobhoff tubes can serve as viable feeding access during rehabilitation without the risks and complications of a surgical feeding tube

Discharge Planning

- Often long-term care facilities have restrictions against temporary feeding access
- There is no evidence that PEG tube placement decreases mortality or aspiration pneumonia as compared to NGT
- Consider delaying PEG placement until immediately preceding discharge; in stroke patients, consider waiting at least 30 days prior to PEG placement
  - Consider decoupling tracheostomy and PEG placements; these procedures do not need to be performed synchronously
  - Consider institutional discussions and protocols between hospitals and long-term care facilities regarding appropriateness of NGT versus PEG tubes

HOW TO NAVIGATE THE CHALLENGE OF THE PEG CONSULT

- Consider protocolized geriatric and/or palliative care consultations in patient referred for PEG tube placement with underlying dementia or deficits following a stroke
- Consider creating institutional, multidisciplinary "PEG evaluation teams" to encourage consistency and collaboration between all services that place PEG tubes (GI, IR, Surgery)
  - Prevent "doctor shopping" between different specialties that place PEGs
  - Establish a plan for who will manage complications
- Consider a waiting period of 7 days after PEG consult/initial discussion before placement

TAKE HOME POINTS

- PEGs are a challenging consult for the acute care surgeon
- Consider protocolized geriatric and/or palliative care consultations in patients referred for PEG tube placement with underlying dementia or deficits following a stroke
- PEG tubes have not been shown to reduce mortality or aspiration risk in patients with dysphagia from dementia or stroke
- To combat the requirement of durable feeding access for discharge to a care facility, we recommend:
  - De-couple the tracheostomy from the PEG
  - Delay PEG placement until immediately preceding discharge to give patients time to either recover to the point of no longer requiring durable feeding access or allow the clinical trajectory to declare itself
  - Consider using the PRESS score to guide method and timing of enteral feeding after a stroke
  - Consider using bridled dobhoff tubes instead of PEGs

WHERE TO HANG:

- Surgeon Lounge
- OR Locker Room
- Resident Workroom
- ICU Workroom

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