The University of Texas Medical Branch
Tube Placement for Enteral Nutrition in Adults (Nov 2017)

Guiding Principles

- Enteral nutrition is preferred over parenteral nutrition, and should be initiated within 24-48 hours of admission. Benefits are present even if a small portion of nutritional needs are met via the GI tract. Very early nutrition (within 4-6 hours) is advocated for patients with burn injuries.
- In the majority of ICU populations, neither the presence nor the absence of bowel sounds and evidence of passage of flatus and stool is required for the initiation of enteral feeding.
- Enteral feeding tubes (small bore) are available at UTMB. Nursing staff may only insert non-styleted enteral feeding tubes.
- Gastric (large bore) tubes are also available at UTMB. While they are traditionally utilized less for feedings, evidence indicates that feedings should not be delayed waiting for placement of a small bore tube, if one cannot be placed easily or quickly.
- If a small bore tube is placed, and placement is confirmed in the stomach, feedings may be initiated, with closer monitoring (see guidelines). Unnecessary delays should be avoided.
- Any tubes placed for the delivery of nutrition or medications may not be utilized until X-ray confirmation of placement (by MD) has been completed. This includes both large bore and small bore tubes. An EPIC order will be entered by MD that the tube is cleared for use.
- Repeat X-rays should be obtained any time there is a concern for potential dislodgement- vomiting, excessive coughing or patient movement, change in tube's external length, etc.
- Securement of the enteral feeding tube using a bridle should be considered for patients with appropriate indications and without contraindications; a physician's order is required for a bridle.

Practice Guidelines

Enteral tube placement (weighted, non-styleted) is appropriate as a first choice for the delivery of nutrition

A. If tube placement is successful, with confirmation of placement in the small bowel, initiate feedings
B. If tube placement is successful, with confirmation of placement in the stomach, initiate feedings if patient meets criteria for gastric feedings (see gastric feeding guidelines)
    1.) Maintain HOB elevation 30-45 degrees
    2.) Monitor patient closely for signs of intolerance
C. If tube placement is successful, with confirmation of placement in the stomach, and the patient **does not meet criteria** for gastric feedings:
    1.) Attempt reinsertion; maximum of two (2) more times
    2.) Consider agents to promote motility
    3.) Place consult in EPIC for evaluation by GI service or Interventional Radiology
    4.) See "Enteral Feeding Tubes with Stylets" on page 2
D. If enteral tube placement has been unsuccessful after two (2) attempts, and the patient **meets criteria** for gastric feedings:
    1.) Insert gastric (large bore) tube, and initiate feedings in the stomach
    2.) Maintain HOB elevation 30-45 degrees
    3.) Monitor patient closely for signs of intolerance
E. If the tube for the delivery of nutrition is inadvertently removed, consult with the treatment team regarding: a.) whether the tube needs to be reinserted, and b.) whether specialized resources will be needed for reinsertion

Tolerance of Enteral Nutrition

- Tolerance of enteral nutrition should be monitored daily; this includes physical exam, review of x-rays, and evaluation for aspiration risk
- Examples of signs of intolerance include vomiting, abdominal distention and/or discomfort, diarrhea, reduced passage of flatus or stool, and abnormal x-ray findings
- Patients with severe hemodynamic instability should be monitored carefully for potential intolerance to enteral nutrition, especially patients who are hypotensive requiring catecholamine agents.

- Measuring gastric residual volumes as a part of routine care is controversial. Some guidelines indicate that routine residual monitoring should be avoided (ASPEN), while others advocate that residuals in critically ill patients should be measured every 4 hours (AACN, Elsevier). Checking residuals on a patient should be individualized and based on a discussion with the treatment team.

Gastric Feeding Guidelines

Patient may receive gastric feedings unless any of the following conditions exist:
1.) Contraindication to HOB elevation
2.) Gastric outlet obstruction or Gastroparesis
3.) Demonstrated intolerance to gastric feedings and/or aspiration of gastric contents

Enteral Feeding Tubes with Stylets

Enteral feeding tubes with stylets may be considered when placement without a stylet has been unsuccessful and when delivery of tube feedings into the small bowel is considered necessary.

1.) Insertion may only be performed by Faculty Physicians, or direct supervision of residents or fellows by Faculty Physician
2.) Options to facilitate placement may include bronchoscopy or GI endoscopy
3.) X-ray confirmation of placement is required

References

American Association of Critical Care Nurses (AACN). Practice Alert. Initial and Ongoing Verification of Feeding Tube Placement in Adults. (April 2016). Retrieved from https://www.aacn.org/clinical-resources/practice-alerts/initial-and-ongoing-verification-of-feeding-tube-placement-in-adults.

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2.) Feeding Tube: Small-Bore Insertion, Care, and Removal. Accessed 10/31/2017.
3.) Feeding Tube: Verification of Placement. Accessed 10/31/2017.

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