Nutritional Support During Neoadjuvant Treatment for Esophageal Cancer

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• Financial disclosures:

None
• Esophageal cancer is characterized by nutritional depletion
  – Dysphagia
  – Odynophagia
  – Cachexia

• Neoadjuvant therapy may further complicate oral intake and result in deterioration of patient’s nutritional status
  – Radiation esophagitis
  – Treatment effect edema
    • Reduction in lumen diameter
  – Nausea/vomiting/anorexia
• Enteral nutritional support
  – Stent
  – G tube
  – J tube

• Stent
  – Advantages:
    • Endoscopic approach
    • Outpatient therapy
    • Facilitate normal oral intake
  – Disadvantages:
    • Stent migration
    • Hemorrhage
    • Stent occlusion
    • Severe reflux +/- aspiration
Figure 2 Available esophageal stents from left to right: Ultraflex, Polylux, Wallflex, Evolution, SX Ella, Niti-S, Alimaxx-E.
Nishimura et al (2002)

- Complications in esophageal CA treated with radiation therapy after stent placement
- Questionnaire survey
  - 47 patients (stage II n=5; stage III n=30; stage IV n=11)
    - The most recent toxicity was worsening of esophageal fistula in 13 patients (28%)
    - Massive hematemesis or GI bleed in 10 patients (21%)

• G tube
  – Endoscopic approach
  – Allows for bolus feeds
    • Increased mobility
    • Normal feeling of satiety
  – Fewer wound care issues
  – May compromise use of the gastric conduit during esophagectomy
  – Maintain gastric tone
• Nagaraja et al (2014)
  – Systematic review and metaanalysis
  – 9 studies with 180 patients
  – Substantial decrease in dysphagia scores
  – Increase in weight and serum albumin
  – 32% stent migration rate
  – Stent migration may indicate response to therapy


• J tube
  – Laparoscopic approach
  – Spares stomach
  – Increased wound care issues
  – Early enteral feeding post esophagectomy
  – Gastric atony
• Ben-David et al (2013)
  – Pre-therapy laparoscopic feeding jejunostomy
    • 153 laparoscopic feeding jejunostomy tube placements between August 2007 and April 2012
    • Placement 10 weeks prior to MIE
    • All patients completed chemoradiation
    • All patients progressed to resection
    • Laparoscopic feeding tube is technically feasible, safe and can provide appropriate enteral nutrition in the preoperative phase of esophageal cancer patients.

Ben-David et al. J Gastrointest Surg., 2013; 17: 1352-1358

153 patients

GE Jxn Adenocarcinoma
N = 127
- No intraoperative complications
- 4 patients with superficial skin infection
- 11 patients required tube exchange

Squamous cell carcinoma
N = 26

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• Conclusions:
  – Nutritional intake is paramount during neoadjuvant therapy for esophageal cancer
  – Enteral feeding is optimal
  – Invasive enteral access is dictated by each clinical scenario
  – Consider future effects of surgical enteral access method