FAST FACTS AND CONCEPTS # 318
PROPHYLACTIC FEEDING TUBES IN HEAD AND NECK CANCERS

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Clinical Background  Patients with head and neck cancer are at risk for reduced oral intake resulting from swallowing difficulties caused by their cancer treatment or obstructive tumors (1,2). International guidelines recommend feeding tube placement for these patients when such swallowing difficulties lead to malnutrition or hunger (3). This indication for feeding tube placement is distinct from feeding tube placement for anorexia and cachexia from progressive cancer, which has been generally discouraged by most experts and clinical guidelines (4) -- see Fast Fact #10. Many clinicians now recommend prophylactic feeding tube placement, or feeding tube placement prior to the onset of cancer treatment or the onset of swallowing difficulties, in the hopes of preventing malnutrition especially among head and neck cancer patients with curative goals of care (5).

Unfortunately, there is a paucity of robust clinical trials comparing the use of prophylactic feeding tube placement in head and neck cancer versus a “watch and wait” approach in which feeding tube placement is considered only when swallowing difficulties and/or malnutrition arise. Therefore, patient values and clinician preference may end up being stronger factors in clinical decision-making than the current body of medical evidence. As such, palliative care clinicians may get involved in this clinical-decision making process to foster optimal patient centered care. This Fast Fact will review some of the benefits and burdens of prophylactic feeding tube placement in head and neck cancer patients.

Head and Neck Cancer Patients Who May Need Feeding Tubes  A single-institution retrospective review suggested that the following factors may be independently associated with the eventual need for feeding tube placement in head and neck cancer patients (6):
• Body mass index < 25 (at baseline)
• A tumor T classification (which relates to the original size and/or location of the primary tumor) ≥ 3
• A cumulative cisplatin dose of 200 mg/m²

Potential Risks of Feeding Tube Placement in Head and Neck Cancer
• Procedure-related morbidity: A retrospective review of percutaneous endoscopy gastrostomy (PEG) tube placement in head and neck cancer (included both prophylactic feeding tube placement and other) showed a procedure-related morbidity rate of 7.4% (7). Post-procedure complications include tube dislodgement and cellulitis.
• Hospitalizations: The hospitalization rate for PEG-related complications in that review was 7.8% (7).
• Dysphagia leading to gastrostomy tube dependence: PEG feeding is associated with paryngoesophageal and upper esophageal stricture attributable to muscle disuse and atrophy from reduced swallowing. While, there is a clinical concern prophylactic PEG feedings can increase the risk for long term dysphagia, a prospective study of head and neck cancer patients receiving prophylactic PEG tubes showed that 86% were able to have the PEG tubes removed within 1 year (8).
• Metastasis: Although rare, metastasis of primary tumor to the gastrostomy site has been reported (9).

Comparative Evidence  Although the comparative evidence is not robust, retrospective and prospective studies have compared prophylactic versus as needed feeding tube placement in head and neck cancer patients receiving chemoradiotherapy.
• Nutritional outcomes: One clinical trial showed modest improvement in malnutrition in the prophylactic group (10). Among other lower quality studies, no consistent difference in BMI at 6 months post-treatment or amount of weight loss during and at the end of treatment have been identified (11-17).
• Unplanned interruptions of chemoradiotherapy: Only one of five studies found that prophylactic feeding tube placement prevented unplanned interruptions of chemotherapy or radiotherapy (11-15).
• Disease-free survival: appears to be similar in both approaches (10, 13-17).
• Quality of life: Feeding tubes can be associated with psychological suffering from interference with family life, intimate relationships, and social activities (18). However, two non-blinded, prospective,
randomized trials suggested that, following an initial decline, prophylactic gastrostomy placement may improve quality of life at 6 months for patients with unresectable squamous cell cancers treated with radiation and chemotherapy (10,14).

**Recommendations** To best assist head and neck cancer patients with this challenging clinical dilemma, clinicians should first identify the intent of therapy and prognosis. In cases in which it is clear that the patient is experiencing refractory cachexia from an untreatable terminal cancer, feeding tube placement should be avoided. In other cases, clinicians may wish to frame the issue around trade-offs – “What are the trade-offs you are and are not willing to make at this point in your medical care?” For patients who prioritize the pleasure from oral feeding or would find the potential interruptions to their family or social life from tube feeding placement (e.g. PEG-related hospitalizations) particularly objectionable, a “watch and wait” approach should be supported by treating clinicians. In other patients who prioritize maximizing nutritional status as they undergo an often grueling cancer treatment, prophylactic feeding tube placement may be prudent, especially if known risk factors are present.

**References**


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