Nutritional Management

After Total Laryngectomy

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Learning Objectives

- Review laryngectomy surgery and post-op nutrition
- Review nutrition assessment for a patient requiring enteral nutrition and MNT for patients after a laryngectomy
- Evaluate role of RDN and collaboration of care with the healthcare team needed for enteral nutrition patients in a hospital setting
Laryngectomy

http://trachs.com/laryngectomy/
Total Laryngectomy

- Removal of the larynx, requiring a new mechanism for speech.\(^1\)
  - Creates separation of nose and mouth from the trachea and lungs, using a tracheostomy for respiration
  - Usually due to cancer or tumors around the larynx

- Goals:
  - Provide safe airway after the removal of larynx
  - Maintain an effective GI tract for oral feeding

[https://www.nursingtimes.net/clinical-archive/critical-care/tracheostomy-4-supporting-patients-following-a-laryngectomy/7005177.article](https://www.nursingtimes.net/clinical-archive/critical-care/tracheostomy-4-supporting-patients-following-a-laryngectomy/7005177.article)
Nutrition Support For Head and Neck Surgery
Enteral Nutrition

- Patient’s with total laryngectomy usually need nutrition support within 24-48 hours after surgery\(^1\)
  - Early nutrition is often started before 24 hours with improved outcomes\(^1\)

- Administered through PEG or NG\(^3\)
  - PEG is easier for access during radiation therapy and reduces risk of fistula\(^1\)

- Patient with increased needs and inability to consume supplements orally\(^2\)
Case Study

- MK 68 year old white male
- Lives alone
- Underwent chemotherapy and radiation in Bozeman for laryngeal cancer
- Former smoker, COPD
- Total laryngectomy, left thyroid lobectomy and isthmusectomy with flap reconstruction
Nutrition Assessment

- **Anthropometrics:**
  - Current weight: 75.6 kg (patients denies any weight loss recently and reports this as a stable weight)
  - Height: 176.53 cm   IBW: 75.5 kg   BMI: 24.26 kg/m²

- **Diet History:** Patient was able to eat his normal meals with a good appetite before surgery

- **Diet Order:** NPO

- **Total Laryngectomy on 1/24/18 with NG tube in place**

- **Patient nods and writes his answers to questions**

- **Labs within normal limits, on IV fluids**
Estimated Energy Needs

- Calories: 1900-2646 kcal/day based on 25-35 kcals/kg body weight\textsuperscript{4}
- Protein: 90-115 grams/day protein based on 1.2-1.5 grams/kg body weight\textsuperscript{1}
- Current body weight: 75.6 kg
- Fluid: 1900-2646 mL based on 1 mL/kcal\textsuperscript{4}
Nutrition Diagnosis

- Increased nutrient needs, calories and protein, related to healing after surgery and recent cancer treatment as evidenced by estimated needs are greater than standard for age.\textsuperscript{5}
Nutrition Intervention

- Collaboration of Care: Reviewed patient with nursing, care management, and speech therapy
- Coordination of Care: Monitor for home tube feeding needs
- Enteral Nutrition: via NG tube
Nutrition Support Plan
Enteral Nutrition for Home

- Formula: Very high calorie nutrition formula
  - Inexpensive for possible home use

- Initiation and Goal rate:
  - Initial bolus volume of 120 mL four times daily
  - Goal volume of 250 mL (1 carton) four times daily

- Water Flushes:
  - Flush tube with 60 mL before and after feeding with additional 240 mL flushes TID

- Energy Provided:
  - At goal will provide 2120 calories, 88 grams protein, 1840 mL water
Collaboration of Care: During Hospital Stay and Preparing for Discharge

- **Registered Dietitian**
  - Create a home tube feeding plan for patient and determine insurance coverage for home supplies

- **Nursing Staff**
  - Administering tube feedings, water flushes, and medications

- **Speech Therapy**
  - Swallow Evaluation for diet advancement

- **Care Management**
  - Works with patient and outside facilities to determine placement

- **ENT Physician**
  - In order for formula coverage, specific documentation is needed in patient charts
Nutrition Monitor/Evaluation

- Body Composition: Weight Trends
- Enteral Nutrition: Formula, Rate, Initiation, Volume
- Nutrition Physical Exam Findings: Bowels, Nausea, Bloating, Pain, Swallow Function
- Patient was able to administer full feedings and water flushes on his own by day 5
- Diet was advanced to clear liquids on day 14 with minimal intake
Conclusion

- Patient discharged with supplies for at least one week of home tube feeding on a clear liquid diet
- Patients with a laryngectomy require nutrition support for proper wound healing and to maintain nutrition status
- Enteral nutrition requires close monitoring and collaboration of care by all professionals of an interdisciplinary team
- Reflection on teamwork and outcomes
References


