Esophageal Cancer Treated with Surgery & Radiation

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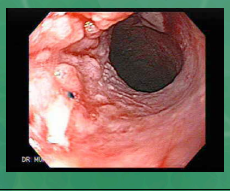
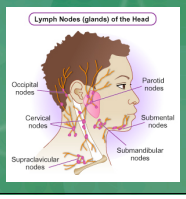
Esophageal Cancer
Background Information

Adenocarcinoma:

- **Definition:** malignancy of the esophagus
  - protrudes through lining tissue layers
  - leads to possible fistulas and spread to the surrounding lymph nodes.





Stages of Esophageal Cancer

- Stage 0: Growth found only in innermost layer of cells lining the esophagus.
- Stage 1: Growth has spread to the 2nd layer of tissue the esophagus.
- Stage 2: Growth has spread all three layers of esophagus and to nearby lymph nodes.
- Stage 3: Growth spread to the outer part of esophagus and potential spreading to tissues lymph nodes near the esophagus.
- Stage 4: Growth found throughout the body and in lymph nodes

Esophageal Cancer
Background Information

- Cause unknown
- Possible correlated risk factors:

1. Consumption of hot beverages and foods
2. Heavy smoking
3. Alcohol consumption } synergistic
4. Male gender
5. African and Asian decent
6. GERD and Barrett's Esophagus (BE)

Esophageal Cancer
Background Information

- Progression often leads to:
1. Aspiration
2. Inability to consume beverages and foods orally
- Prognosis almost always fatal; 5 year survival rate of 16%.
- Incidence:
1. New cases in 2008: 16,470
2. Deaths per year: 14,280
- Prevalence:
1. Third most common cancer in G.I. Tract.
2. United States: highest incidence in urban areas and overall incidence is about 5 in 100,000.

Literature Review
CAM

Title: *Transitioning From Preclinical to Clinical Chemopreventive Assessments of Lyophilized Black Raspberries: Interim Results Show Berries Modulate Markers of Oxidative Stress in Barrett's Esophagus Patients*

- Hypothesis: "Dietary administration of black raspberries may inhibit the progression of Barrett's Esophagus"

Literature Review
CAM

- Variables:

Dependent:

1. Stress Markers: 8-epi-prostaglandin & 8-hydroxy-2'-deoxyguanosine
2. Cell and DNA Damage

Independent: Lyophilized Black Raspberries (LBR)

Results: Overall oxidative stress and cell/ DNA damage decreased.

Discussion/Conclusions:

- Not significant decrease in oxidative stress and malignant cell growth.
- LBR high anti-oxidant properties & combined with traditional cancer treatment provide additional relief.

Literature Review
MNT

Title: *Modulating Effects of the Feeding Route on Stress Response and Endotoxin Translocation in Severely Stressed Patients Receiving Thoracic Esophagectomy.*

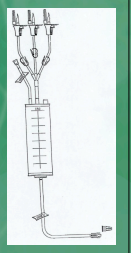
-Retrospective study on 29 Male patients who underwent an esophagectomy.

-Separated into 2 groups: TPN or Enteral Nutrition

- Interleukin-6 &10 and endotoxins were monitored 1 wk before operation, and 2 hours, 1,3,7 days post operation.

Literature Review MNT

- Results
  - Acute phase responders were significantly lower in EN patients than TPN patients.
  - Perioperative EN may be the preferred method of nutrition for esophagectomy patients.



Patient Information

Mr. Nick Seyer

- Male
- Age: 58 years
- Height: 6'3"
- Current Weight: 198lbs
- Occupation: Contractor
- Lifestyle: Smoker (2 packs daily) and alcohol (1-2 beers daily)

Patient information Cont.

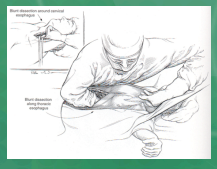
- Chief Complaint: Heartburn and difficulty swallowing (4-5 months)
- Medical History: No prior hospitalizations
- Nutrition History: Normal appetite and diet/ No aversions to foods previous to illness
- Medical Diagnosis: Stage IIB adenocarcinoma of the esophagus

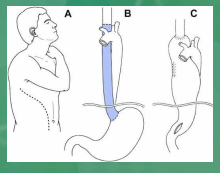
Previous Surgery to MNT

Type: Transhiatal Esophagectomy

Description: diseased esophagus is removed and…

1. Reconnected with the stomach.
2. Part of the descending colon is used and reconnected to the stomach.





Patient Information

Diet- Drug interactions: None

Usual Food Intake: Good (previous to illness)

24-hour recall: Decreased food intake and overall Kcals due dysphagia and heart burn

Patient Information Cont.

Allergies: None

Family Influences: Wife purchases and prepares foods.

Lifestyle risk factors: heavy smo
and moderate alcohol consumpt

Patient Assessment

Medical History: None

Biochemical Parameters:

Normal: BMI (24.8), Sodium (136 mEq/L) and BUN (10 mg/dL)

Low: Albumin (3.0 g/dL), Total Protein (5.7 g/dL), Prealbumin (12 mg/dL), Transferrin (175 mg/dL), RBC (4.3 x10^6/mm^3), Hgb (13.9 g/dL), and Hct (38%)

High: CPK (172U/L), ESR (15 mm/hr) *[reactant to acute illness]*

Patient Assessment Cont.

Physical Assessment:

- Moderately weight loss
- %UBW: 86%
  (14% loss over several months: Moderate)
- BMI: 24.8 (Normal)
- Dysphagia (3-4 months)
- Odynophagia (5-6 months)
- Eyes sunken

Prescribed Tube Feeding
By Physician

Placement: Jejunal Feeding Tube
Formula: Isosource HN 1.5 @75ml/hr
Provides:
Total: 2700 kcals
Protein: 122g
Free Water:1386 ml
Flushes: 75ml/ hr

*** Not meeting his Caloric needs of 2919 Kcals**

Diagnosis

Inadequate oral food/beverage intake (NI-2.1) related to dysphagia and decreased appetite as evidenced by 14% unintentional weight loss over several months and patient report of difficulty swallowing.

Nutrition Intervention

- The patient's current TF is not meeting his kcal and protein needs.
- We recommend increasing TF formula rate to 85ml/hr. This provides:
  - 3060 kcals
  - 138g Protein
  - 1571ml Water
  - 335ml flushes every 6 hrs

Nutrition Intervention Cont.

- If signs of intolerance, switch to elemental formula, Peptamen1.5 @ 85ml/hr
- Education on smoking cessation & alcohol consur

Patient Goals

- **Outcome Goals**: Stop involuntary weight loss, and increase all serum protein levels to normal range.

Monitor/Evaluate

- Monitor any changes in electrolytes, serum proteins, and weight.
- Monitor for tolerance of tube feeding. Check for diarrhea, and nausea.
- Follow up in 24 hours. Referral to speech pathologist in1-2 wks for swallow test to determine whether pt. can be advance to PO diet.
- Radiation usually occurs 2-4 week post surgery referral to outpatient RD if side effects affecting PO intake occur

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