Lymphoma Treated with Chemotherapy

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KNH 406
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Denise Mitchell

- 21 yr. old college student
- Chief complaint
- Pt Hx
  - No significant illness until past 2-3 mos
  - Onset of disease:
    - Fevers, night sweats
Symptoms/Physical Exam

- General Appearance
- Vitals
- HEENT
- Chest/Lungs
Diagnosis

- Diagnostic measures:
  - Chest X-ray, chest CT, MRI, bone marrow biopsy, and biopsy of suspect lymph nodes

- Stage II Diffuse large B-cell lymphoma
  - with mediastinal disease & positive lymph nodes.
Etiology

- Lymphoma Defined
- Classification of Stage II
- Mayo Clinic
  - Classic signs of lymphoma: Swollen but painless lymph nodes in the neck, armpit or groin in the early stages. Later stage symptoms: fever, night sweats, fatigue, weight loss, abdominal pain or swelling, extremely itchy skin, and chest pain, coughing or trouble breathing.

Prevalence:
- 30 types of non-Hodgkin lymphoma; DLBCL most common.
- In the US, DLBCL affects about 7 people out of 100,000 each year.
Treatment

- Chemotherapy regimen of:
  - cyclophosphamide, doxorubicin, vincristine, and prednisone.
- Radiation therapy to start 3 weeks after third cycle of CHOP
- Nutritional Side Effects
Medical Nutrition Therapy

- **Nutrition Hx:** appetite decreased, no nausea, vomiting, constipation or diarrhea

- **24- Hour Recall**
  - AM: 1 slice dry toast, plain hot tea
  - Lunch ½ c. ice cream, ¼ c fruit cocktail, few bits of other foods on tray
  - Dinner: 1 oz. chicken, 2 Tbsp. mashed potatoes, ½ c Jell-O, plain hot tea
Assessment

- 21 Female, pale, fatigued, fever, cough
  - Dx: Stage II large B-cell lymphoma
  - BMI: 19.36
  - UBW: 130lbs.
    - Denise is 92% of her UBW
  - Current wt.= 120 lbs
- Decreased appetite. No NV
- Albumin: 3.3 g/dl (Normal: 3.5-5 g/dl)
- Total protein: 5.5 g/dl (Normal: 6-8 g/dl)
  - High WBC, low HGB, HCT, Ferritin
**Needed Energy & Protein**

- Denise’s protein needs are as follows:
  - $1.5 \text{ g} \times 54.4 \text{ kg} = 81.8 \text{ g} \text{ PRO}$

- Since Denise is hypermetabolic, she will need 30-35 kcal/kg for her energy requirements. Therefore, she needs:
  - $30 \text{ kcal} \times 54.4 \text{ kg} = 1,632 \text{ kcal}$
  - $35 \text{ kcal} \times 54.4 \text{ kg} = 1,904 \text{ kcal}$
  - $1,632 + 1,904 / 2 = 1,768 \text{ kcal}$

- **24 Hour Recall**: Only provided only providing 332 kcal and 13.5 grams of protein.
Diagnosis

- PES #1: Impaired nutrient utilization related to hypermetabolism as evidenced by low lab values.

- PES #2: Inappropriate kcal intake related to anorexia related to involuntary weight loss.
Intervention

- Increase protein levels to 1.5g/kg to get lab values WNL.
- Increase kcal intake to involuntary loss in weight by giving Denise 35 kcal/kg. Total of 1,768 kcal/day

- Small, frequent meals; desirable foods
- Nutritional beverages between meals
Monitoring/Evaluation

- Reassess lab values (albumin, prealbumin, CRP) within 5-7 days of tx.
- Physical signs
- Weight gain/loss checked every 2-3 days.
  - Physical signs (N/V, early satiety?)
Prognosis

Revised International Prognostic Index (R-IPI)
- Age > 60
- Serum Lactate Dehydrogenase Concentration above normal
- Stage III or IV
- ECOG performance status >2
- Number of extranodal disease sites >1

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<th>4-yr PFS</th>
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References