

NUT116BL
Winter 2015

Name: Jean Liu _____
Section: A01 _____

Mini Case Study #3

20 points

2/27/2015

Present illness: LM is a 75 yo M presenting with L sided weakness, slurred speech, and difficult swallowing. The speech pathologist has completed a swallow evaluation that reveals **severe oropharyngeal dysphagia**. He must be kept NPO. Patient's spouse is at bedside and reports 'everything being fine' until 2 days ago when patient lost function of his left side and was slurring his speech. She called 911 and brought him to the ED and was admitted right away. She says he has always been a big guy and loves his food and wine. His activity consisted of overseeing their winery and playing 18 holes of golf on the weekend.

Dx: acute CVA

PMH: HTN

Anthropometrics: Height 6', Weight 240#

Labs: Albumin: 3.8 g/dL Na: 134 mEq/dL Cl: 101 mEq/dL
K: 3.6 mEq/dL CO2: 26 mg/dL Cr: 0.8 mg/dL
Glu: 276 mg/dL Total Cholesterol: 245mg/dL

Meds: Toprol, coumadin

Diet: NPO

1. Using IBW, calculate LM's nutritional needs, including calories, protein and fluids.
(show calculations) **(6 points)**

Weight: 240 lbs = 109.09 kg

Height: 72 inches = 182.88 cm = 1.83 m

BMI = $109.09 / (1.83)^2 = 32.57$ (Class 1 Obesity)

IBW = $106 + (6 \times 5) = 178$ lbs = 80.9 kg

% IBW = $ABW / IBW \times 100 = 240 / 178 \times 100 = 134.83\%$

Caloric needs

Mifflin-St Jeor

REE = $(10 \times 80.9 \text{ kg}) + (6.25 \times 182.88 \text{ cm}) - (5 \times 75 \text{ yr}) + 5 = 1586$ kcal/day

TEE = $1586 \times 1.0-1.2 = 1586 - 1903.2$ kcal/day

Protein needs

$80.9 \text{ kg} \times 0.8-1.0 \text{ g/kg} = 64.7-80.9 = 65-81$ g pro/day

Fluid needs

1600 - 1900 mL fluid/day

2. What micronutrient and food sources need to be considered for a patient on Coumadin? **(2 points)**

For a patient on Coumadin, the time it takes for blood clotting to occur in the patient is decreased. Vitamin K needs to be considered because it helps the body in clotting blood. Food sources of vitamin K include green leafy greens and herbs.

Ref: ods.od.nih.gov/pubs/.../coumadin1.pdf

3. Define dysphagia and how it impacts your nutrition intervention. **(2 point)**

Dysphagia is the difficulty or inability for a person to swallow. It impacts nutrition interventions because it directly changes if the patient would be able to consume a meal normally or not. A common result of dysphagia is weight loss and nutritional deficiencies because of the inability to intake the food.

4. Name and describe the 3 levels of the National Dysphagia Diets. **(3 point)**

- 1) Dysphagia pureed: cohesive, viscous, pudding-like, homogenous, thick, requires minimal chewing so it is easy to swallow
- 2) Dysphagia mechanically altered: moist, semi-solid, requires some chewing
- 3) Dysphagia advanced: less moist, chunkier parts, requires more chewing

5. The referring physician is recommending the placement of a PEG tube. What are your formula recommendations? List type of formula, volume and rate that best matches your calculated calorie and protein goals. (show calculations) **(4 points)**

Type of formula: Jevity (Abbott)

Volume: $1750 \text{ kcal} / 1.06 \text{ kcal/mL} = 1650 \text{ mL formula}$

Rate of delivery: $1650 \text{ mL} / 24 \text{ hours} = 68.5 \text{ mL/hour} = 70 \text{ mL/hour}$

Formula/day = $70 \text{ mL/hour} \times 24 = 1680 \text{ mL/day} = 1700 \text{ mL/day}$

Calorie goals:

$1750 \text{ mL} \times 1.06 \text{ mL/kcal} = 1855 \text{ kcal/day} = 1800 \text{ kcal/day}$ (within 1600-1900 kcal/day)

Protein goals:

$1650 \text{ mL} \times 44 \text{ g protein} / 1000 \text{ mL} = 72.6 \text{ g pro/day} = 73 \text{ g pro/day}$ (within 65-81 g/day)

6. Is this volume of tube feeding adequate to meet his fluid needs? If not, indicate what else is needed and how it would be added to the current tube feeding. (show calculations) **(2 points)**

Free water from formula: 83%

$1650 \times 0.83 = 1369.5 = 1350 \text{ mL of free water}$

This volume of tube feeding is inadequate to meet his daily fluid needs (1600-1900 mL/day)

$1650 - 1350 \text{ mL} = 300 \text{ mL of water needed from free water flushes}$

24 hours/flushes Q 4 hours = 6 flushes/day

$300 \text{ mL} / 6 \text{ flushes/day} = 50 \text{ mL Q 4 hours}$

$50 \text{ mL Q 4 hours} \times 6 = 300 \text{ mL/day from free water flushes}$

300 mL + 1650 mL = 1950 mL fluid/day

7. Write 1 appropriate PES statement for the patient's nutrition problems. **(1 points)**
Inadequate oral intake (NI-2.1) r/t severe oropharyngeal dysphagia, lost function of left side aeb speech pathologist recommendation for NPO and enteral feeding for nutritional needs.