ADIME Breast Cancer Case Study #31

NUTRITION ASSESSMENT

Patient name: Mrs. Smith

Age and gender: 61 yr, Female

Diagnosis: Breast Cancer–stage IIB Invasive ductal carcinoma T2N1miM0 18 months previously

Pertinent medical history: Type II Diabetes Mellitus

Diet order: n/a–outpatient

Medications: metformin, docetaxel, doxorubicin, cyclophosphamide (every 3 weeks for 6 cycles)

Labs:

- High glucose: 137 mg/dL (ref. 70-99 mg/dL)
- High C-reactive protein: 1.1 mg/dL (ref. <1.00 mg/dL)
- High cholesterol: 210 mg/dL (ref. <200 mg/dL)
- High TG: 155mg/dL (ref. 35-135 mg/dL)
- High HBA1C: 6.8% (ref. <5.7%)
- Low Hbg: 11.9 g.dL (ref. F 12-16)
- Low Hct: 36% (ref. F 37-47)

Weight: 175# , 79.4kg

Height: 5'5", 65 inches

BMI: 29.12 kg/m^2 (overweight)

IBW: 125 lbs (113lbs-138lbs) , 57kg (51kg-63kg) (+/- 10%)

%IBW: 140% (obese)

UBW: 195#, 88.4kg

%UBW: 89.7%

% wt change: 10.3%, moderate malnutrition

Comments about weight history:

The patient has weight loss related to chemotherapy treatment. Nausea, vomiting, diarrhea, and mucositis was reported. Patient states that she would like to continue to lose weight until a healthy BMI is reached.

Nutrition-Focused Physical Assessment significant for: lumps or odd fatty deposits in breast for recurrence of breast cancer

Summary of dietary intake and food preferences:
Diet high in saturated fats, refined CHO's, processed foods, and alcohol

Nutrition Impact Symptoms: patient stated she experienced nausea, vomiting, diarrhea, dysgeusia, ageusia, and mucositis due to chemotherapy treatments (but is currently not experiencing symptoms)

Nutrition Needs:
Calories (range of calories): 25-30 kcals/kg/d (1,985- 2,382 kcals/day using actual weight) (1,425-1,710 kcals for IBW–but not attainable)
Protein (do not restrict): 1.5-2 g/kg/d (119-158 gm protein/day)
Fluids (provide range): 1-1.5 ml/kcal/d (1,985-2,382 mL/kcal/day)

NUTRITION DIAGNOSIS

PES Statement
Overweight, adult (NC-3.3) RT excessive carbohydrate, sugar intake, little to no exercise AEB 24-hour recall, high blood glucose, high cholesterol, high TG, and high HbA1C lab results.

NUTRITION INTERVENTIONS

Food and Nutrient Delivery: Diet or nutrition support recommendations

- SFM–encourage smaller proportions in food and satiety
- Low fat, mediterranean, or plant-based diet (ND-1.2) to aid in wt loss and well rounded lipid profile (TG and cholesterol)
- Meals and Snacks–increase consumption (ND-1.2)
    - Low glycemic foods with fruits, vegetables, and whole grains to lower TG and cholesterol and wt loss
- Decrease sugar-sweetened beverages (ND-1.4) to help lower blood glucose and pt weight

Nutrition Education

- E-1.1 Purpose of the nutrition education:

    - How to properly start and maintain a plant-based diet
    - The importance of maintaining a healthy weight and BMI
- E-1.5 Recommended modifications:
    - How to cook with healthy fats and which fats to avoid or reduce
- Printed materials provided and reviewed
    - Plant based diet handout
    - Beginners guide to moderate-intensity exercise
    - Re-emphasis on type 2 DM with pamphlets and how to intertwin it with plant based diet

Strategies

- Display empathy and non-judgemental attitude towards pt and their education counseling sessions pertaining to breast cancer post-treatment and type 2 DM care
- Utilize motivational interviewing skills when meeting with pt and their husband
- Assess patient's readiness to change
- Determine patient's food preferences and incorporate them into diet intervention plan
- Focus interventions based on patient's needs and personal goals

Custom list of suggestions provided to implement nutrition goals and recommendations.

- Consume more fruits, vegetables, and whole grains and less processed carbohydrates
- Mediterranean diet (increase consumption of whole grains, lean protein, and omega-3 fats)
- Limit/eliminate alcohol consumption
- Replace soda with sparkling water or unsweetened tea
- Bring in a 3 day food record and follow up on the patient's progress with dietary changes
- Supplements
    - Vitamin D supplement/glutamine – to help regulate insulin levels & prevent cancer recurrence and acts as an antioxidant to prevent oxidative stress
    - Omega 3 fatty acid supplement (fish oil)-- to decrease inflammation
    - Iron–to increase Hgb and Hct lab values

Approach

- Inform Mrs. Smith about the vegetarian diet, the benefits and importance of limiting her alcohol intake, and recommending different sources of healthy fats versus saturated fats that she consumes from red meats
- Educate Mrs. Smith on the benefits of a plant-based/vegetarian diet and having a healthy BMI by providing pamphlets and resources
- Provide list of plant-based protein sources such as tempeh and tofu

Coordination of Care

Collaboration and referral: personal trainer, oncology physician, diabetes physician

Discharge and transfer: n/a

Goals

- Lose 1-2 pounds/week until IBW has been reached (upper limit)
- Limit consumption of red/processed meats to less than 18 oz per week
- Limit soda sweetened beverages to 2x/week with other options such as sparkling water or unsweetened teas
- Start exercising 3-4 times per week with a workout plan from personal trainer (light-moderate intensity sessions) and incorporating more walks with pt dog
- Improve blood glucose, TG, cholesterol, and HbA1C lab values within 3 months within reference ranges
- Limit alcohol consumption (less than 2 drinks per week)--substitute with red wine rather than white riesling

NUTRITION MONITORING and EVALUATION

Timeframe for follow-up: follow up in 2 weeks for weight goals, physical activity and dietary intake.

Monitor and Evaluate:

- Reassess body weight (AD-1.1.2) to ensure that pt is losing 1-2 pounds/week to achieve IBW (upper limit)

- Reassess glucose (BD-1.5.1), TG (BD-1.7.7), cholesterol (BD-1.7.1) to ensure that they are within reference range for a well rounded lipid profile in regards to overweight status
- Reassess C-reactive protein (BD-1.6.1) and HgbA1C (BD-1.5.3) so that they fall within reference range to ensure a decrease in inflammation and type 2 DM
- Reevaluate pt Hgb (BD-1.10.1) and Hct (BD-1.10.2) to ensure that levels resurface to reference range so that pt does not fall into iron deficiency post chemo and radiation (anemia of chronic disease)
- Reevaluate physical activity (FH-7.3.2) and their log to ensure that pt has been physically active (30min-1 hour of light exercise 4x per week) to aid in lowering TG and cholesterol levels and wt.
- Reevaluate pt food diary/recall to ensure that pt has incorporated more whole grains, fiber, omega 3 fatty acids, fruits and vegetables, while eliminating alcohol consumption and limiting refined CHO and added sugars–helps with wt loss goals and inflammation post-chemo and radiation and adherence to type 2 DM diet recommendations (FH-5.1.1).
- Evaluate toxin levels due to occupation of working in cosmetology company and its probable carcinogenic effects

Monica Wilson, Jillian Arizcuren, Janeza Bridges, Lani Morales
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