Nutritional management cirrhosis of the liver disease: A case report

Verona Mulgrave, Oyonomo Ntekim and Chimene Castor
Howard University, USA

Statement of the Problem: According to the nation center for health statistics, cirrhosis of the liver is the 12th leading cause of death in the US and it is primarily caused by alcoholic liver disease. National center for health statistics indicated cirrhosis is higher in blacks than in whites and the highest mortality rate is among Hispanics. Results from NHANES suggested that the frequency of steatohepatitis and cirrhosis varies significantly by ethnicity of 45% Hispanics, 33% whites and 24% among blacks, Mexican Americans and Blacks have a greater risk of developing liver diseases than their white counterparts.

Methodology & Theoretical Orientation: The objective of this study is to investigate the importance of specific nutrients in the nutrition management of cirrhosis of the liver. This study was a single-subject case report of a 49-year-old African American male that was diagnosed with several comorbidities including idiopathic cirrhosis of the liver. This subject was chosen at random from the Howard University Hospital. Data was gathered from both primary and secondary sources including medical records, interview of nurses and patient's interview. Patient underwent paracentesis and thoracocentesis (thoracentesis) to remove excess fluids. Dietary recall and food charts were used to gather dietary information and to monitor intake over a two-week period. Dietary intervention was completed over a 3-weeks period. Post examinations were completed including physical and medical examinations, dietary evaluation as well as biochemical data collection. All data were analyzed against standards.

Findings: 49-year-old African American male with social history of smoking tobacco was admitted due to abdominal pain and distention for 2-weeks. Patient was diagnosed with cirrhosis of the liver, dyslipidemia, hypertension, fluid overload, diabetes mellitus and chronic renal insufficiency. Physical examination reveals the presence of ascites, jaundice and scratch marks, skin rashes and skin discoloration. Nutrition focus finding reveals that patient was emaciated, had temporal wasting, bilateral edema as well as several incidences of vomiting and constipation. Patient underwent paracentesis and thoracocentesis to remove excess fluids. Prior to being hospitalized patient was consuming a high sodium, high fat diet and was noncompliant with previous diet regiment. The patient was discharged after eight days of hospitalization.

Summary of Investigation: Patient had several nutrition diagnoses including malnutrition, inadequate oral intake and impaired nutrient utilization and increase energy and nutrient requirements. Goals for treatment included providing adequate energy, protein vitamin and minerals as well as improvement in nutritional by promoting weight maintenance. Patients' weight was stabilized on a 1000 ml-1500 ml fluid restriction, 1800 kcal and 75 g of protein diet. Patient had a fair appetite (consumed 60% of 3 meals per day). Patient's liver condition was stabilized with a diet prescription of 2 g Na diet, CHO controlled, medium chain fat supplementation and multivitamin supplementation as evidenced by stabilized lab values for AST, ALT, ALP, PT and PTT. Lab values of LDL, TAG was normalizing after the reduction in fat and cholesterol diet, which was administered along with Simvastatin over a 10-day period.

Conclusion & Significance: Nutrition plays a key role in the management of cirrhosis of the liver specifically restricting fluid and sodium, providing adequate carbohydrate, protein and medium chain fatty acid as well as micronutrients such as B vitamins and the fat-soluble vitamins.

verona.mulgrave@gmail.com