Hepatic disorders

Health & Medicine

Hepatic Disorders The research study was conducted with an aim of establishing whether bioelectrical impedance analysis (BIA) could be used as a nutritional indicator in settings for the diagnosis of malnutrition (Dossel & Shlegel, 2009). This is because the technique is able to produce results, which can be interpreted to signify cell death or malnutrition that is characterized by changes, in cellular membrane competence. According to Dossel and Shlegel, BIA is a technique that produces results that can be interpreted to signify cell death or malnutrition that is characterized dysfunctional cell membranes and integrity. The research aims to establish whether dieticians for nutritional evaluation at the various stages of chronic liver disease (CLD) and other hepatic disorders can use the technique. Sixty-six patients were enrolled into the research study who were at different levels of progression of CLD. Their probability of their death or survival due to liver related complications was calculated and factored into the hypotheses of the research study. Nutritional diagnosis was based on measuring their mid arm circumference (MAC), mid arm and muscle circumference (MAMC) and triceps skin fold thickness (TST) (Dossel & Schlegel, 2009). Their subject global assessment (SGA) was also calculated as a relation to the overall results. Clinical and biochemical evaluation was done on their hepatic tissue and serum samples. The results garnered from the experiment illustrated an increase in derived-phase angle (Pha) of the BIA in well fed test subjects as compared to underfed participants(Dossel & Schlegel, 2009). This conclusion was arrived at by looking at the SGA of patients who had no hepatic encephalopathy. Calculations were also able to reveal that there was a significant co-relation between the Pha and the nutritional diagnosis data that was collected earlier. The body serum albumin

from the research study participants displayed an inverse correlation with age of the subjects. The research results garnered from the experiment supported the conclusion that BIA-derived Pha of a patient is highly associated with patient survival rates. A decreased Pha is related to increase in risk of death from CLD and other hepatic disorders. The conclusion, from the research study, was successfully able to support the thesis that BIA derived Pha can be used and applied as a tool of nutritional evaluation, in CLD patients.

The hypothesis posted for the research study adequately addressed the purpose set out by the researchers, and it was conclusively supported by the research findings. The decision to use patients already diagnosed with CLD was a wise choice because it saved the research team time and resources used to find participants. Patient data was also readily available from prior diagnosis, which made it easier and quicker to focus on the key purpose of the research. The methodology of the research study provided the researchers with ample time to consult other related data like SGA, which was used to support the results. The research study did not use a control group of participants without any CLD related features. This is because the use of a control can be used to further support the role that Pha plays in prediction of survival in patients with CLD.

The use of BIA derived Pha can be used by a nutritionist to determine which therapeutic nutritional regimens have the most significant and positive effect on a patient. This would help in advancing the use of nutritional therapeutics, which has a twofold advantage on the patient's health. This is because apart from mitigating and treatment of CLD, nutritional therapeutics improves the patient's health guaranteeing the patient's health. This research offers

registered dieticians the opportunity to formulate patient specific diets to address each patient's special condition.

References

Dossel, O. & Schlegel, W. C. (2009). World Congress on Medical Physics and Biomedical Engineering September 7 - 12, 2009 Munich, Germany: Vol. 25/VII Diagnostic and Therapeutic Instrumentation, Clinical Engineering. Illustrated Edition. Springer.

Retrieved From: http://www. ncbi. nlm. nih. gov/pubmed/23588459

Peres, W. A., Lento, D. F., Baluz, K. &Ramalho, A. (2012). Phase angle as a nutritional evaluation tool in all stages of chronic liver disease. US National Library of Medicine: National Institute of Medicine.