Association between Nutritional status, CD4 count and Opportunistic infections of HIV patients receiving Anti-retroviral Therapy (ART) and to study the impact of Diet and lifestyle Counseling on their Nutritional Status

Authors: Pallavi G. Shettigar[1], Kiran Kumar N[2] and Pratik Pokharel*

[1]Assistant Professor- Senior Scale, Dietetics, Department of Allied Hospitality Studies, Manipal University, Manipal, Udupi, India

[2] Medical Officer, ART plus Centre, Ajjargad, Udupi, India

*Essential Nutrition Action Officer, SUAAHARA, Jajarkot district, Nepal, M.Sc. Dietetics and Applied Nutrition, Manipal University, Udupi, India

Corresponding author email: pokharelpratik1921@gmail.com

Background: HIV infection and insufficient nutritional intake are part of a vicious cycle that contributes to immunodeficiency and negative health outcomes like malnutrition. However, the exact empirical evidence of association is limited and hence obligatory.

Objectives/Aim: To see the association of nutritional status, CD4 count and opportunistic infections in HIV patients receiving ART and to study the effect of Nutrition and Health Education Counseling on KAP and nutritional status.

Methodology: This interventional study was done in ART Centre, Udupi, India with a sample size of 66 divided into two groups namely EG and CG. The EG patients were given Nutrition and Health Education counseling before intervention while CG patients were not. We recorded the biochemical parameters, 24 hour dietary recall, FFQ and KAP questions using a structured interview before and after intervention. Diet Cal software and PGSGA scoring was also used.

Results: Odds ratio showed no significant association between nutritional PGSGA stage and CD4 class (OR- 0.829^{NS}, CI 0.271-2.536) and opportunistic infections reported with nutritional PGSGA stage (OR- 0.944^{NS}, CI 0.332-2.691). Pre-KAP mean of EG was 151.56 which increased to 169.13 after intervention which is significant at 1%. Likewise, Pre- EG showed a mean energy intake of 1888.45 kcal whereas, the post- EG showed a mean energy intake of 1973.18 kcal, p=0.007* significant at 5% level.

Conclusion: We observed significant increase in KAP and other nutrients intake post intervention, brought about by the counseling given to the EG patients. Although previous researches show that there is an association of nutritional status with CD4 count and opportunistic infections, no significant association was observed here. Hence, Nutrition and Health Education Counseling should be made an integral part in the management of HIV for patients receiving ART.

Keywords: Nutritional counseling, Nutritional status, HIV, ART, Diet.