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Locally made ready-to-use-therapeutic food (RUTF) for management of malnutrition using animal models

Florence Wakhu Wamunga and Brian J Wamunga
University of Eldoret, Kenya

High levels of protein energy malnutrition are a major cause of high infant and child morbidity and mortality rates. Ready-to-use-therapeutic foods (RUTF) are used in any cultural setting for the treatment of severe acute malnutrition (SAM) without medical complications and where there is appetite. Effectiveness trials of alternate formulations of RUTF in the treatment of malnutrition are needed before they can be considered as substitutes for the milk-based RUTF. Ready-to-use-therapeutic foods were formulated using soybeans as a milk substitute. This was a controlled trial using albino rats designed to evaluate the effectiveness of the developed food in the management of malnutrition. The objectives of the study were to determine the effect of the locally developed RUTF on growth and rehabilitation of malnourished animal models and to determine the effectiveness of the locally made ready-to-use-therapeutic foods in decreasing mild to moderate malnutrition. Complete randomized trial using 20 rats was carried out for a period of 30 days. The rats were fed on a protein free diet for a period of 10 days. The rats lost weight. Since they could not be allowed to lose more than 20% of their body weight, they were put on a rehabilitation using the three formulations with plumpy'nut as the control. The rats were weighed on alternate days. There was steady weight gain among the four groups of rats. All the formulations were statistically similar to the plumpy'nut in terms of weight gain which is an indicator of growth. These formulations, therefore, can and should be used in the management and treatment of malnutrition.

Biography

Florence Wakhu Wamunga has completed her PhD at Kenyatta University, Kenya. She is a Lecturer at the University of Eldoret, Kenya in the Department of Family & Consumer Sciences. She is a Project Leader in a VLIR-UOS funded project. She has published more than 10 papers in reputed journals and has been serving as an Editorial Board Member of repute.

florencewaku@yahoo.com

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