EuroSciCon
JOINT EVENT

August 25-26, 2023
Webinar

Euroscicon Conference on

7TH INTERNATIONAL CONFERENCE ON
NUTRITIONAL BIOCHEMISTRY

Environmental Enteropathy and Anaemia status among under-five children, in slum areas of Jimma town, Ethiopia

Rediet Regassa
Jimma University, Jimma, Ethiopia

Abstract

Background: The most important anemia next to iron deficiency is anemia of inflammation. Micronutrient deficits, such as those in zinc and iron, can be caused by intestinal permeability and gut inflammation brought on by environmental enteric dysfunction. This study was aimed to evaluate the prevalence and association of anemia with Environmental Enteropathy. Methods: Data on water sanitation and hygiene indicators and sociodemographic characteristics was collected by using structured questioner. The lactulose to mannitol ratio (L: M) was calculated from the concentration of both sugars in the urine. Level of Hemoglobin was detected by using Hemocue -301 digital photometer. Blood and urine sample was collected from three hundred children aged 12-59 months to determine the status of Anaemia and Environmental Enteropathy respectively. Results: Data were analyzed by using Descriptive statistics, cross-tabulation, and logistic regression model to indicate prevalence and association of anemia with environmental Enteropathy in children less than five years old. The prevalence of anemia in children with environmental enteropathy was 63.8% (95% CI: 57.6, 71.7), and there was a significant association (p = 0.0001, AOR 3.502, 95% CI: 1.929–6.371) between anemia and environmental enteropathy. In a multivariate analysis, children aged 1-3 years with caretakers who had no or only primary education and with monthly income of less than 3,000 ETB were more likely to develop anemia.

Conclusions: The result of this study indicated that two-thirds of children less than five with environmental enteropathy had developed anemia, and there is a significant association between environmental enteropathy and anemia. Even though there are other causes of anemia, based on the findings of this study, more research is needed to identify factors associated with environmental enteropathy to mitigate anemia due to intestinal permeability or malabsorption and its impact in children under the age of five.

Key words: Environmental Enteropathy, Environmental Enteric Dysfunction, Inflammation, lactulose mannitol test, Anaemia, WASH, Malnutrition

Biography

Rediet Regassa is a Ph.D. candidate at Jimma University, Jimma, Ethiopia. She holds her Master's in public health and Master's in health informatics from Addis Ababa University, Addis Ababa, Ethiopia. She has been working as an instructor at Menelik Health Science College, as a researcher at Addis Ababa University, and as a lecturer at Selale University.

Received: 30-03-2023; **Accepted:** 03-04-2023; **Published:** 30-09-2023