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Topic: Malnutrition treatment and prevention

Title: Prevalence of Intestinal Parasites, and its Association with Severe Acute Malnutrition Related Diarrhoea

Presentation Type: Oral

Introduction: Intestinal parasites (IPs) contribute to undernutrition while diarrhoea remains the commonest illnesses leading to death among children with severe acute malnutrition (SAM). The objective of this study was to determine the prevalence of IPs and its association with diarrhoea in children admitted with SAM.

Methods: This cross-sectional study enrolled SAM children 6-59 months. SAM was diagnosed basing on WHO definition of SAM. From each child, fecal samples were collected and screened for presence of IPs using direct microscopy and modified Ziehl-Neelsen. Bivariate and multivariate logistic regressions were used in data analysis.

Results: The overall prevalence of IPs was 32.8%. The prevalence of protozoa (20.9%) was higher than helminths (13.9%) infections ($p=0.0354$). *Giardia lamblia* had the highest prevalence at 15.4% followed by hookworm at 9%. All other intestinal parasites like *Entamoeba histolytica*, *Cryptosporidium* species, *Entamoeba coli*, and *Isopora* species, *Ascaris lumbricoides*, *Hymenolepis nana*, *Schistosoma mansoni*, *Trichuris trichura*, *Strongyloides stercoralis* and *Taenia* species had a prevalence ranging from 2.5 to 5%. Adjusted logistic regression analysis showed that children presenting with *Giardia lamblia* were 3.53 times most likely to present with diarrhoea (95% CI: 4.15-142.3, $p<0.0001$) and 19.8 times at risk of having chronic diarrhoea (95% CI: 7.3-53, $p<0.0001$) after controlling for age, sex, HIV status and fever. Children with fever were 2.12 times likely to present with diarrhoea in adjusted logistic analysis (95% CI: 1.1 - 4.0, $p= 0.02$).

Conclusion: Successful routine IPs screening could increase the diagnostic rate of parasitic diarrhoea and improve the treatment strategies of diarrhoea in SAM children.