

ABSTRACT

Introduction: Malaria and helminthiasis have a ubiquitous distribution in the tropical regions of the world. The aim of the study was to determine the impact of malaria and soil transmitted helminthiasis coinfections in the induction of anemia and severe malaria among children (1 – 15 years). Methodology: Cross sectional study was carried out in fifteen health centers of Bugesera District, Rwanda - between April 2014 and October 2014. A total of 465 patients were included for this study. Of these, 210 (45.2%) were males and 255 (54.8%) were females. Finger prick blood and stool were collected and examined according to the established standard methods. Main findings: Out of 465 children enrolled, the overall prevalence for malaria, helminthiasis and anemia was 30.8 %, 47.5% and 30.1 % respectively. The prevalence of malaria and helminthiasis was highest in the age group of 6 -10 years while anemia prevalence was highest in the age group of 1 – 5 years. The prevalence of malaria and helminthiasis co-infection was 61.5% while the associated anaemia prevalence was 38% higher than the overall prevalence due to malaria and helminthiasis alone. Malaria – helminthiasis coinfection is significantly associated with severe malaria. The major helminthes were *Ascaris lumbricoides* (86.7 %), *Trichurus trichiura* (8.9 %), and *Ancylostoma duodenale* / *Necator americanus* (4.4%). Conclusion and recommendations: Severe malaria was dominant in co-infected children. Anaemia was more prevalent among age group of 1 – 5 years, and intestinal helminthiasis was more prevalent in the age group of 6 -10 years. The associations between malaria - helminthiasis co-infections reported in this study needs further investigation. De-worming adults in the same house hold needed urgent national policy review and implementation. There is need to screen for Helminthes in patient with malaria.