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**Paper Poster Session**

**Clinical parasitology and epidemiology**

**Prevalence of hookworm infection and its association with anaemia in a rural community in north-western Amhara, Ethiopia**

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**Background:** Among Soil Transmitted Helminths (STH), hookworm (*Necator americanus*, *Ancylostoma duodenale*), are the most prevalent of the neglected tropical diseases (NTD) in sub-Saharan Africa, widely distributed in rural and urban areas. Ethiopia is the third country with higher prevalence in Africa. The World Health Organization recommends mass drug administration (MDA) for controlling the prevalence of STH, being the level of prevalence determinant for the interventions: in regions with prevalence higher than 50%, MDA should be implemented twice per year. These control strategies are focused on children less than 14 and women of childbearing, the most vulnerable groups.

**Material/methods:** To determine prevalence of hookworm infection in and its association with anemia, blood and fecal specimens were collected in a rural community belonging to Bahirdar, Amhara region, Ethiopia. The houses were randomly selected. The study was carried out in November 2014, after the rainy season in the area. Haemoglobine tests were done in the reference laboratory of the region. Stool specimens were processed with a device (Bloparaprep MINI®) based on a modification of Ritchie's concentration method.

**Results:** 65 people were included: 62% were adults and 38% less than 14. The mean age was 28 (range 5-90). Of adults, 46.3% were women, and 73.7% of them of childbearing age. The overall prevalence of intestinal parasites was 90.76%, being hookworm the main parasite identified: 82%. The hemoglobin values ranged 3.1 to 16 g/L, mean (12.2). The prevalence of anemia was 36.92% (mild: 45.8%, moderate: 25%, severe: 29.2%). All patients with anemia except 3 (2 adult women of childbearing age and 1 child, all with severe anemia) were infected by hookworm. There was no significant difference between the prevalence of anemia in children and adults. Even more, there was no significant difference when comparing the group of women of childbearing age with the rest of adults (men and women >44). No association between anemia and hookworm infection was found.

**Conclusions:** The prevalence of hookworm is unexpectedly high in all groups of age, but it is not associated with anemia in our sample, maybe due to the small size of the sample and also other factors must be considered. In our sample, men and women above the childbearing age are also a population at risk of infection and anemia. In order to manage intervention strategies as these groups of adults sustain frequently the household wealth, it would be advisable to implement larger studies to know the prevalence of hookworm and other intestinal parasites, as well as other morbidity factors, at community level.