

The Impact of Artesunate-Amodiaquine on Schistosoma mansoni Infection among Children Infected by Plasmodium in Rural Area of Lemfu, Kongo Central, Democratic Republic of the Congo

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Abstract : Malaria and schistosomiasis remain life-threatening public health problems in sub-Saharan Africa. The infection pattern related to age indicates that preschool and school-age children are at the highest risk of malaria and schistosomiasis. Both parasitic infections, separately or combined, may have negative impacts on the haemoglobin concentration levels. The existing data revealed that artemisinin derivatives commonly used to cure malaria present also in antischistosomal activities. The current study investigated the impact of Artesunate-Amodiaquine (AS-AQ) on schistosomiasis when administered to treat malaria in rural area of Lemfu, DRC. A prospective longitudinal study including 171 coinfecting children screened for anaemia, Schistosoma mansoni, and Plasmodium falciparum infections. The egg reduction rate and haemoglobin concentration were assessed four weeks after the treatment with AS-AQ, of all coinfecting children of this series. One hundred and twenty-five (74.4%) out of 168 coinfecting children treated and present during the assessment were found stool negative for S. mansoni eggs. Out of 43 (25.6%) children who remained positives, 37 (22%) showed a partial reduction of eggs amount, and no reduction was noted in 3.6% of coinfecting. The mean of haemoglobin concentration and the prevalence of anaemia were, respectively, $10.74 \pm 1.5 \text{g/dl}$, $11.2 \pm 1.3 \text{g/dl}$, and 64.8%, 51.8%, respectively, before and after treatment, $p < 0.001$. The AS-AQ commonly used against Plasmodium allowed curing S. mansoni in coinfecting children and increasing the Hb level. For the future, the randomized and multicentric clinical trials are needed for a better understanding of the effectiveness of AS-AQ against Schistosoma spp. The trial registration number was 3487183.

Keywords : paludisme, schistosomiase, as-aq, enfants lemfu

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