



S. haematobium infection and Chemotherapy-induced changes in Interleukin-6 and acute phase proteins associated with inflammation in school children in a Schistosomiasis- endemic area

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Abstract:

There is an increased risk of cases of morbidities from inflammation caused by *Schistosoma haematobium* infection, hence the need to determine levels of inflammatory markers in *Schistosoma haematobium* infected children and determine effect of repeated annual mass treatment on levels of interleukin-6 and acute phase proteins. Urine specimens from 212 school children were collected and examined to determine prevalence of *Schistosoma haematobium* at baseline and 2 years following annual rounds of praziquantel treatment. Levels of 4 acute phase proteins and IL6 were measured at baseline and 2 years following praziquantel treatment. Overall pre-treatment prevalence of *Schistosoma haematobium* infection was 23.1 % at baseline and 0.47 % after 2 years of annual treatments. *Schistosoma haematobium* infected children had marginally higher levels of procalcitonin and tissue plasminogen activator before treatment though the difference of all three was not significant $p > 0.05$. Levels of ferritin and fibrinogen were lower in *Schistosoma haematobium* infected children before treatment, however the difference was also not significant $p > 0.05$ using Mann-Whitney test. There was no association between infection status or interleukin-6 and the levels acute phase proteins $p > 0.05$ for all acute phase proteins. Findings suggest no bearing of *Schistosoma haematobium* infection status on level of acute phase proteins before and after annual treatment with praziquantel. Extent of inflammation cannot be determined using ferritin, tissue plasminogen activator and fibrinogen. Levels of interleukin-6 did not have any bearing on levels of acute phase proteins. There is need to explore other acute phase proteins as inflammatory markers in *Schistosoma haematobium* infection.

Biography:

Tawanda Chisango completed his PhD at the age of 37 years



from University of KwaZulu Natal, South Africa from School of Laboratory Medicine,. He is a Chemical pathologist by profession with over 10 years experience in a medical laboratory setup. He has published more than 10 papers in reputed journals.

Recent Publications:

1. Midzi N, Mduluza T, Chimbari MJ, Tshuma C, Charimari L (2014) Distribution of Schistosomiasis and Soil Transmitted Helminthiasis in Zimbabwe: Towards a National Plan of Action for Control and Elimination. *PLoS Negl Trop Dis* 8(8): e3014
2. Ayoya MA, Spiekermann-Brouwer GM, Stoltzfus RJ Alpha 1-acid glycoprotein, hepcidin (2010) C-reactive protein, and serum ferritin are correlated in anemic schoolchildren with *Schistosoma haematobium*. *Am J Clin Nutr* 91:1784-1790.
3. La Flamme AC, MacDonald AS, Pearce EJ (2000) Role of IL-6 in directing the initial immune response to schistosome eggs. *J Immunol* 164:2419-26.

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