Type: Poster Presentation

Final Abstract Number: 45.008
Session: Parasitology and Parasitic Infections
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

Occurrence of human African trypanosomosis among HIV patients in Ankpa General Hospital, Kogi State Nigeria

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Background: Human African trypanosomosis is a vector borne parasitic disease transmitted by tsetse flies. *T.b.gambiense* infection decreases the specificity of antibody detection test for HIV diagnosis and symptoms of HAT are not sufficient to make a diagnosis. This study was therefore designed to investigate the occurrence of Human African trypanosomosis among Human Immunodeficiency virus patients in Ankpa General Hospital, Kogi State.

Methods & Materials: Blood samples were collected between August and December 2011. Ethical clearance was obtained from the Kogi State Ministry of Health. 465 blood samples were collected from HIV patients at the Hospital after their consent was sought. Subjects were selected using systematic random sampling and information on the age, sex, and occupation of the HIV patients were obtained. Blood samples were screened serologically using the card agglutination test for *t.b.gambiense* (CATT) and parasitologically using the wet mount and HCT.

Results: The overall seroprevalence of HAT in Ankpa general hospital among HIV patients was 3.01% (14/465). Seroprevalence among females and males were 3.60% (12/333) and 1.52% (2/132) respectively. There was no significant association ($p > 0.05$) between infection and sex. There was a seroprevalence of 3.63% (12/330) and 2.04% (2/98) among the age groups of 18-45 years and above 45 years respectively which were not statistically significant ($p > 0.05$). There was no significant association ($p > 0.05$) between the infection and occupation and farmers had the highest seroprevalence of 5.00% (10/200). Blood samples that were seropositive were further subjected to parasitological technique for confirmation and came out negative. Questionnaire survey showed 79.35% (369/465) had heard of HAT with school 32.25% (119/369) and tales told or myth 67.75% (250/369) as the media. It also showed a significant association ($p < 0.05$) between education, age, occupation and awareness to HAT. Despite the respondents claims of having heard of HAT, their knowledge on the transmission, causal factor, prevention, treatment and control was inadequate.

Conclusion: This study has established a serological evidence of HAT among HIV patients in Ankpa general Hospital, Kogi State. Increased surveillance of HAT among HIV patients and public awareness campaign on HAT is recommended.

http://dx.doi.org/10.1016/j.ijid.2014.03.748

Type: Poster Presentation

Final Abstract Number: 45.009
Session: Parasitology and Parasitic Infections
Date: Thursday, April 3, 2014
Time: 12:45-14:15
Room: Ballroom

Morphometric and molecular characterizations of schistosome populations in Estuaire Province Gabon

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Background: Schistosomiasis is a parasitic disease affecting 207 million people, mostly in sub-Saharan Africa (Steinmann et al., 2006), caused by digenean trematodes living in the vascular system of Vertebrates. The genus *Schistosoma* includes 21 species; one-third are responsible for human schistosomiasis, four of which exist in Africa: *Schistosoma mansoni*, *S. haematobium*, *S. intercalatum* and *S. guineensis*. Both *S. mansoni* and *S. haematobium* have a large geographical distribution in Africa, whereas *S. intercalatum* is limited to the Democratic Republic of the Congo and *S. guineensis* to the Lower Guinean Gulf (Cameroon, Equatorial Guinea, Sao-Tome and Gabon) (Brown et al., 1984; Pages et al., 2003). Two species of human schistosomes exist in Gabon: *S. guineensis* and *S. haematobium* (Gilles, 1971). The hypothesis of a hybridization zone between *S. guineensis* and *S. haematobium* has been suggested in two provinces of western Gabon, Moyen-Ogooue (Burchard & Kern, 1985) and Estuaire (Richard-Lenoble, 1993). The aim of this study was to validate, or not, the presence of hybrids between *S. guineensis* and *S. haematobium* in Estuaire province by using egg morphometry and a powerful molecular tool in identification of schistosomes (Kane et al., 2002) and their hybrids (Webster et al., 2005, 2007), the single-stranded conformational polymorphism (SSCP) analysis.

Methods & Materials: Egg morphometry and single-stranded conformational polymorphism (SSCP) analysis on adult worms were used in order to characterize the schistosome populations of two sites (Libreville, uraban area an Ekouk, rural area).

Results: The morphology of the eggs showed three morphotypes: *S. haematobium*, *S. guineensis* and intermediate morphotypes, but the eggs of the morphotype *S. guineensis* were smaller compared to the values found in the literature. Furthermore, the SSCP analysis of the adult schistosomes showed that all the patterns corresponded to that of *S. haematobium* and gave evidence that hybrids were absent from our samples.

Conclusion: The hypothesis according to which hybrids existed in Gabon was certainly true in the late 1980s and early 1990s but was not validated by the results presented here, almost 20 years later, when the epidemiological study detected only *S. haematobium*.

http://dx.doi.org/10.1016/j.ijid.2014.03.749