

## Abstracts of the 9th European Congress on Tropical Medicine and International Health

**PSI.176****Urinary schistosomiasis and intestinal helminthiasis among school children and out-of-school children in an endemic community in Nigeria**B. Adewale<sup>1</sup>, M. Sulyman<sup>1</sup>, T. Idowu<sup>2</sup>, D. Akande<sup>1</sup>, M. Ajayi<sup>1</sup> and M. Mafe<sup>1</sup><sup>1</sup>Public Health Division, Nigerian Institute of Medical Research, Lagos, Nigeria; <sup>2</sup>Zoology Department, University of Lagos, Lagos, Nigeria

**INTRODUCTION** The current status of urinary schistosomiasis and intestinal helminthiasis was assessed in Ipogun, a rural agrarian community in Nigeria, as part of a longitudinal study to monitor praziquantel resistance in the control of schistosomiasis.

**METHODS** Urine and faecal samples were collected from children in the community to determine the parasites prevalence and intensity. Filtration technique using Swinnex filter was employed in examining the urine specimen and the intensity of infection was recorded as egg output per 10 ml of urine. The Kato-Katz technique was used in examining the faecal samples. Individual egg output was expressed as eggs per gram faeces.

**RESULTS** Of the 430 children aged 5–18 years examined for *Schistosoma haematobium* and other intestinal helminthic infections, 25.1% were infected with *S. haematobium*. The prevalence of infection of *S. haematobium* was 26.1% in school children and 18.6% in out-of-school children. Only 17.6% of the children had moderate intensity of infection (>50 eggs/10 ml but <500 eggs/10 ml of urine) while the remainder had low intensity (<50 eggs/10 ml of urine). Intensity of infection based on geometric mean egg count per 10 ml of urine was higher in females (18.2 eggs/10 ml urine) than in males (11.7 eggs/10 ml urine). There was no significant difference in the prevalence of infection between males (26.7%) and females (23%) ( $P = 0.3$ ). 26.3% had single infection of intestinal helminths while 4.7% had multiple infection. 13.7% had severe intestinal helminth infections (>400 eggs/gram faeces).

**CONCLUSION** The immediate and long term public health and socioeconomic implications of this on the cognitive ability of these children, school absenteeism and drop-out rates could be enormous. This could result in a generation of adults disadvantaged by irreversible sequelae of infection.

**DISCLOSURE** Nothing to disclose.

**PSI.177****The effect of high-voltage pulse current on the infectious of schistosome cercariae in water**

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The effect of high-voltage pulse current on the infectious of schistosome cercariae in water was investigated. The infected rate and intensity in mice were regarded as the infectious indicators of schistosome cercariae after treated by various parameters of high voltage pulse current. The results showed that the voltage and frequency of electric current, and the distance from electrode to water surface, were important factors influencing the effects of cercariae infectious. The higher the voltage, the higher the frequency, and the narrower the distance, the better the effects of cercariae killing. The result implied that the high voltage pulse current can inactivate schistosome cercariae and can be applied in schistosomiasis control under certain circumstances.

**DISCLOSURE** Nothing to disclose.

**PSI.178****Urinary schistosomiasis in Guinea Bissau**M. C. Botelho<sup>1</sup>, A. Machado<sup>2</sup>, A. Carvalho<sup>3</sup>, M. Vilaça<sup>1</sup>, O. Conceição<sup>1</sup>, H. Alves<sup>1</sup>, J. Richter<sup>4</sup>, M. E. Bottazzi<sup>5</sup> and A. A. Bordalo<sup>2</sup><sup>1</sup>National Institute of Health Dr. Ricardo Jorge, Porto, Portugal;<sup>2</sup>ICBAS, Porto, Portugal; <sup>3</sup>Santo Antonio Hospital, Porto, Portugal;<sup>4</sup>Medical Faculty, Heinrich-Heine University, Dusseldorf, Germany;<sup>5</sup>Section of Pediatric, Tropical Medicine & Molecular Virology & Microbiology, Baylor College of Medicine and Texas Children's Hospital, Houston, TX, USA

Urogenital schistosomiasis due to *Schistosoma (S.) haematobium* is among the most prevalent parasitoses in sub-Saharan Africa.

The pathology is characterized by serious and irreversible lesions in the urogenital tract induced by chronic infection with the parasite that can eventually lead to renal failure due to hydronephrosis and to squamous cell carcinoma of the bladder. Considering the frequency and severe morbidity observed already in young children, the purpose of this pilot study was to assess the prevalence and morbidity of *S. haematobium* infection in Guinea Bissau.

A baseline survey was conducted during September 2011. A randomly selected sample of 90 children aged 6–15 years old was included in this study.

Prevalence of *S. haematobium* infection was 20% (18/90). It was higher in older children (median age in years: 15.4 ± 2.71 vs. 9.3 ± 2.22;  $P < 0.001$ ), a significant gender difference in prevalence and intensity was not found. The predominant symptom was haematuria (87.1%), this symptom being strongly associated with *S. haematobium* infection ( $P < 0.01$ ).

Anthropometric examination revealed that growth in infected boys was impaired as compared to non-infected boys (median height in cm: 123.3 ± 21.07 vs. 134.71 ± 15.1) ( $P < 0.05$ ).

To our knowledge this is the first epidemiologic report of *S. haematobium* infection in Guinea Bissau. Considering the high prevalence of *S. haematobium* infections in Guinea Bissau and the long-term risks, including renal failure and bladder cancer, our results indicate that this population should be targeted for follow-up and implementation of measures for treatment and control of schistosomiasis.

**DISCLOSURE** Nothing to disclose.

**PSI.179****Draining ditches at Dongting Lake control *Oncemelania* breeding**W. Wangyuan<sup>1,2</sup> and W. Kailin<sup>1</sup><sup>1</sup>Hunan Institute of Science and Technology, Yueyang, China; <sup>2</sup>Hunan Institute of Schistosomiasis Control, Yueyang, China

**OBJECTIVE** To evaluate the effect on snails by reducing the soil moisture content of a beach.

**METHODS** From November of 2009 to November 2012, we chose the snail infested beach of Yueyang Jail in the East Dongting Lake area and Junshan District as research fields, designed a prospective control study, then dug ditches in the shape of '田' by excavator, and compared the effect of soil moisture content on snails.

**RESULT** Before the intervention, the average soil moisture content of both beaches was 35.56%; after the intervention, the average soil moisture content was 26.53% on the intervention site, significantly lower than the 35.56% at the control site ( $F = 6.53$ ,  $P < 0.05$ ). Before the intervention, the natural mortality rates of snails were 0.98% and 0.89%, (year 2009  $\chi^2 = 0.09$ ,  $P > 0.05$ ), but the snail density in the intervention site fell year by year and vanished naturally 3 years later after the