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# EPIDEMIOLOGY AND APPLIED BIO TECHNIQUES IN ASSESSMENT OF LYMPHATIC FILIARIASIS IN TARABA STATE, NIGERIA

**<sup>1</sup>Obadiah Sambo Elkanah, <sup>2</sup>Elkanah D. S and <sup>3</sup>Kela S. L**<sup>1</sup>Taraba State University, Nigeria<sup>2</sup>Abubakar Tafawa Belewa University, Nigeria

Lymphatic filariasis caused by a mosquito-borne filarial nematode is a major public health problem which affects people of all ages and both sexes. The disease inflicts considerable social and economic burden, and the second leading cause of long-term disability in the tropics and subtropics. The study employed the following methods: Rapid assessment method to search for clinical manifestation, use of immunochromatographic card test to determine circulating filarial antigen (CFA) in diurnal blood, standard parasitological technique (using thick blood film preparation) to detect microfilaria of *W. bancrofti*, interviews, focus group discussion and administration of questionnaires to obtain socio-cultural data. 1,554 night blood samples of individuals from Taraba state were collected by finger prick method and analyzed for the presence of *W. bancrofti*. 494 (31.99%) of individuals were infected with *W. bancrofti* with mean microfilarial density of 5.23 mf/60  $\mu$ L blood. Infection rates among the twenty communities surveyed differed significantly (ANOVA,  $P < 0.05$ ). There was no significant ( $\chi^2 = 0.13$ ,  $df = 1$ ,  $P > 0.05$ ) difference in sex-related infection. There was however, significant ( $\chi^2 = 39.649$ ,  $df = 7$ ,  $P < 0.05$ ) difference in infection among the different age groups. Various clinical manifestations were observed, close association between microfilaraemia and itching ( $r = 0.742$ ,  $P < 0.05$ ), ADL ( $r = 0.83$ ,  $P < 0.05$ ), Dermatitis ( $r = 0.92$ ,  $P < 0.05$ ) and Hydrocele ( $r = 0.69$ ,  $P < 0.05$ ) were recorded. However, microfilaraemia was not significantly ( $r = 0.39$ ,  $P > 0.05$ ) related to elephantiasis and lymphoedema of breast ( $r = 0.40$ ,  $P > 0.05$ ). Serological examination using immunochromatographic whole blood card test in diurnal blood from 336 persons (181 males and 155 females) in 11 communities gave antigenaemia prevalence of 30.05%. Analysis of the performance of immunochromatographic card recorded 73.27% specificity with confidence interval of (66.86%-79.04%) and sensitivity of 44.16% with confidence interval of (32.84%-55.93%). Our findings in the current study has confirmed that lymphatic filariasis is a Public Health problem and already integrated intervention programs had been instituted in the endemic areas.

elkana03@yahoo.com