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Incidence and prevalence of herpes simplex virus type-2 infections among fishermen in Kisumu, KenyaR.O. Ondondo^{1,*}, Z.W. Ng'ang'a², S. Mpoke¹, M. Kiptoo¹, E. Bukusi¹¹ Kenya Medical Research Institute, Nairobi, Kenya² Jomokenyatta University of Agriculture and Technology, Nairobi, Kenya

Background: Men with high-risk sexual behavior are important drivers of HIV/STIs in the general population. Prevention of HIV/STIs among such men could potentially reduce these infections among women - who bear the greatest HIV/STIs disease burden. HSV-2 infection has been shown to be strongly associated with HIV infections. We sought to estimate the incidence of HSV-2 infection among fishermen.

Methods & Materials: Three hundred fishermen were recruited and followed-up every 3 months for 1 year. Specimen for HIV, HSV-2 serology and data on structured demographic questionnaire were collected at baseline and exit.

Results: The fishermen had a mean age of 28 years and 76% were married. A significant number of men; 183 (61%) $P < 0.01$ and 118 (39%) $P < 0.05$, never used condoms with their frequent sexual partners and new sexual partners respectively. Baseline HSV-2 prevalence was 56.3% and married men were 3 times more likely to have HSV-2 infections compared to single (never married) men adjOR 3.2(95% CI; 1.8–5.5), $P < 0.001$. HIV positive men were twice more likely to be co-infected with HSV-2 compared to HIV negative men adjOR 2.2(95% CI; 1.2–4.2). At baseline, men who reported only one sexual partner in the last one month were less likely to have HSV-2 infections compared to those who reported multiple sexual partners for the same period adjOR 0.09(95% CI; 0.01–0.74). The annual HSV-2 incidence was 23.6%. HSV-2 negative men reporting a casual partner as their most recent sexual partner at baseline had increased risk of HSV-2 acquisition adjRR 6.7(95% CI; 2.4–18.1). Those reporting consistent condom use of over 75% at baseline had reduced risk of acquiring HSV-2 adjRR 0.12(95% CI; 0.03–0.54) $P < 0.01$, whereas those who reported no condom use (0% usage) had increased risk of acquiring HSV-2 adjRR 3.2(95% CI; 1.3–7.9), $P < 0.01$. Multiple number of sexual partners in the past 1 year was strongly associated with incident HSV-2 infection, $P < 0.01$.

Conclusion: Fishermen comprise a young sexually-high-risk population, with high HSV-2 incidence and prevalence. Low condom use coupled with concurrent multiple sexual partnerships predispose fishermen to HSV-2 infections.

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Trichomoniasis in women attending an antiretroviral clinic in South AfricaA.C. Dijkmans^{1,*}, I. Rukasha², A.A. Hoosen³¹ Medisch Centrum Haaglanden, The Netherlands, Leiden, Netherlands² National Institute of Communicable Diseases, Johannesburg, South Africa³ University of the Free State, Bloemfontein, South Africa

Background: To determine the rate of *Trichomonas vaginalis* infection in HIV positive women attending the anti-retroviral clinic at the Tshwane District Hospital, Pretoria and to evaluate conventional diagnostic methods against molecular assays.

Methods & Materials: Vaginal specimens were obtained from consenting women who were attending an anti-retroviral clinic. *Trichomonas vaginalis* was diagnosed by wet mount microscopy, culture with InPouch (Biomed Diagnostics, USA) and a commercial PCR assay (*Trichomonas vaginalis* 240/250 IC, Sacace Biotechnology, Italy; targeting the DNA repeat units of *T. vaginalis*). Specimens were considered positive for *T. vaginalis* when positive by wet mount, culture or PCR. Discrepant results were subjected to a real-time PCR assay targeting the beta-tubulin gene.

Results: Self-collected vaginal swabs were obtained from 95 women, of whom 26 were pregnant. Wet mount microscopy detected 5/95 (5%) infections, while culture was positive in 21/95 (22%) and 28/95 (30%) were PCR positive i.e. PCR identified 7 additional infections. Ten of the 26 (39%) women were infected.

Conclusion: This study showed a high infection rate (30%) of *T. vaginalis* in HIV positive women attending a clinic for anti-retroviral therapy. There was a significant difference when molecular assays were used for diagnosis compared to conventional wet mount microscopy and/or culture. The latter is commonly used for diagnosis in state health facilities. This study recommends the use of molecular assays for optimum diagnosis of trichomoniasis. Furthermore, screening and treatment of trichomoniasis is recommended for all women attending anti-retroviral clinics in a high HIV burden country such as ours.

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