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Betapapillomavirus frequency among HIV infected black Zimbabweans with cutaneous lesions

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HPV types from the Betapapillomavirus (β -HPVs) genus are ubiquitous in non-melanoma skin cancers (NMSC), hyperkeratotic skin warts and in cancer free skin biopsies among fair skinned races. There is paucity of information regarding the prevalence and distribution of β -HPVs among black Africans. To determine the prevalence of β -HPV genotypes in cutaneous infections among black Zimbabweans and their association with NMSC, a cross-sectional study was carried out in which skin biopsies were collected from patients attending a referral hospital. HPV typing was done by Primer mix polymerase chain reaction (PM-PCR) and the subsequent reverse hybridization assay (RHA) which is known to identify 25 cutaneous β -HPV types implicated in skin lesions. One hundred and fifty biopsies from participants with clinically apparent cutaneous warts (CW) (n=34), suspected NMSCs (n=98) and 18 Kaposi sarcoma (KS) lesions with confirmed pathology reports were analysed. Of the 150 participants, 77 were HIV infected. The overall prevalence of HPV was 70.1%. HPV DNA positivity was significantly higher in the HIV positive group 57 (79.2%) (OR=2.42, 95%CI (1.09-5.47), P=0.018) compared to 44 (61%) in the HIV negative participants. Frequency of HPV DNA positivity in the different biopsy specimens were; NMSC (58%), CW (100%) and KS (89%). There was an association between NMSC and HPV DNA positivity [OR=0.063, 95%CI (0.007-0.270), P<0.05]. A total of 67 (46.5%) participants had multiple HPV types, 74 (51.4%) had between 1- 4 HPV types whilst 21 (14.6%) had >5 HPV types. Interestingly, 89% of the KS biopsies generally associated with Human Herpes Virus 8 (HHV8) infection were also positive for HPV DNA. β -HPVs are not uncommon in the Zimbabwean black population with skin lesions. The study provides baseline molecular-epidemiological information for cutaneous HPV infections in Zimbabwe.

Biography

Alltalents T Murahwa has recently completed his masters degree in immunology at the University of Zimbabwe. He was studying Human papillomavirus cutaneous infections among HIV infected black Zimbabweans. He has published a paper on that and another is in print. Alltalents has had a long career of 10 years as a medical laboratory scientist in various research and government departments.

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