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Hr–HPV: Distribution of high risk human papillomavirus strains in young women of KwaZulu-Natal, South Africa: Implications for vaccination

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High Risk Papillomavirus (hr-HPV) genotypes are causal agents for cervical cancer and some geographical variation has been reported. Available vaccines cater for up to nine hr-HPV genotypes, which may not necessarily be the most predominant strains in every region of the world. Data on HPV genotype in South African regions is limited and unavailable for KwaZulu- Natal (KZN) province .Our study aimed to describe hr-HPV genotype distribution among young women in relation to cervical cancer vaccination. A total of 1223 sexually active young women were recruited from high schools, 658 (54%) were from Ugu and 565 (46%) from Ilembe districts and these were investigated for high risk Human Papillomavirus, using GP5/6+ primers and enzyme immunoassay. Of the 1223 vaginal lavages, 301 (25%) were positive for hr-HPV. Of these, 177 (27%) and 124 (22%) were from Ugu and Ilembe districts respectively ($p = 0.046$). HPV type distribution per district revealed an overall similar distribution, the most predominant types in descending order were HPV 16, 51, 18, 35, 33, 56, 45, 52 and 59. Our data describes high-risk HPV strains infecting young women in the KwaZulu-Natal province and demonstrated that the new nanovalent HPV vaccine does not protect against all predominant hr-HPV types. HPV 51, 35 and 56 are most prevalent in KZN yet not covered by the nanovalent vaccine. Investigation of cervical cancer cases would be necessary to ascertain that these types are involved in a significant proportion of these cases.

Biography

Z L Mkhize-Kwitshana holds a PhD in Immunology. She is the Head of the Biomedical Sciences Department- Faculty of Natural Sciences at Mangosuthu University of Technology. Her research focus is mainly on immunology of co-infections. She has published 10 peer –reviewed articles in national and international journals and 18 Conference Proceedings; she serves as a reviewer for several reputable journals and is an Editorial Board Member for the international journal IJMA. She is a founder of the SA National Parasite Control Task Team and is also an Executive Committee Member of the South African Medical Research Council Board.

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