



Prevalence of oncogenic Human Papillomavirus genotypes in women with vulvar and cervical squamous cell carcinoma in Botswana

Patricia Rantshabeng^{1,2}, Sikhulile Moyo^{1,3}, Ishmael Kavosve¹, Andrew Ndlovu¹, Simani Gaseitsiwe³

1. Department of Medical Laboratory Sciences, School of Allied Health Sciences, Faculty of Health, University of Botswana, Gaborone, Botswana. 2. Department of Pathology, Faculty of Medicine, University of Botswana, Gaborone, Botswana. 3. Botswana-Harvard AIDS Institute Partnership, Gaborone, Botswana.

BACKGROUND

Increasing evidence worldwide shows that HR HPV causes invasive cervical SCC and its precursor lesions. Studies have also shown that HPV infection is associated with other genital cancers such as vulvar, anal and penile SCC with HPV 16 being the mostly commonly isolated in the developed world. Knowledge on the prevalence of high risk HPV in HPV associated SCC is crucial for selecting appropriate vaccines in cervical and anogenital cancer prevention programs for a particular region.

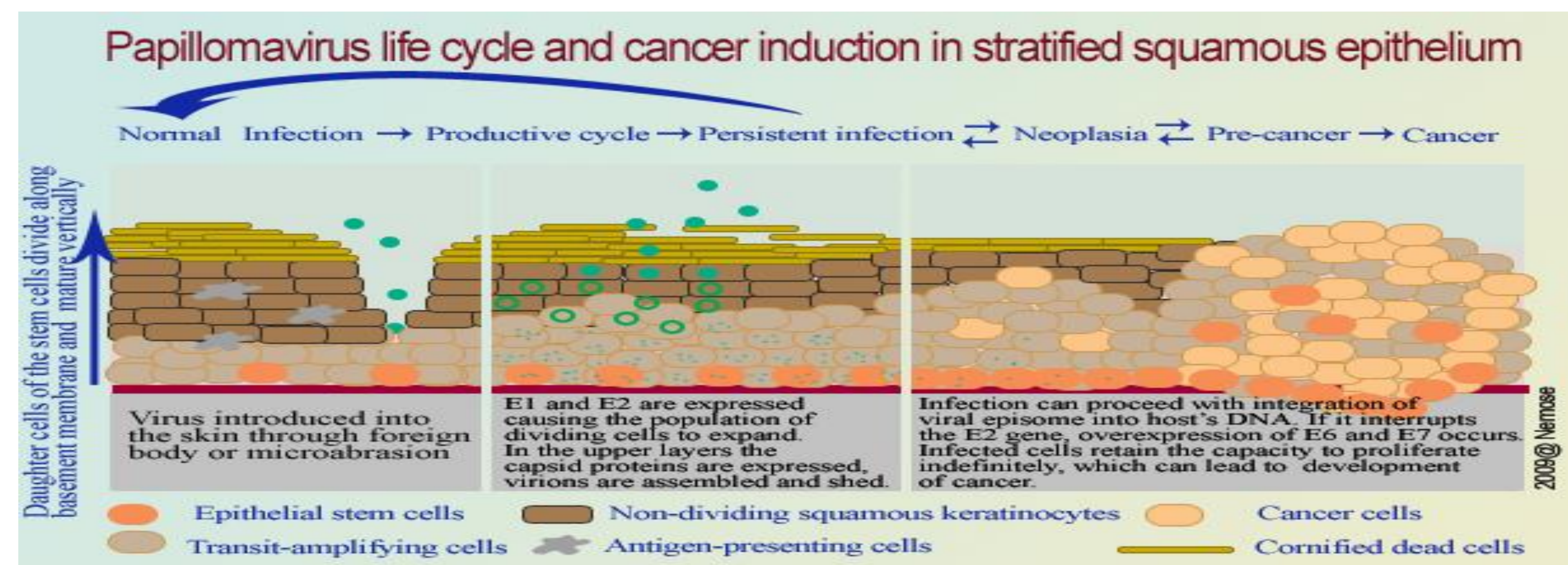


Figure 1 shows HPV lifecycle. Source: (<http://www.ascp.org>).

AIMS

To determine the prevalence of HR HPV genotypes in the patients diagnosed with anogenital SCC in Botswana and its distribution patterns.

METHODS

FFPE cervical and vulvar tissue blocks diagnosed with SCC from 141 women were used. DNA was extracted from tissue sections and genotyped for the 14 high risk HPV types using Abbott m2000 Real time PCR platform. This assay is a qualitative test that is able to detect all the 14 high risk HPV but differentiates between HPV 16, HPV 18 genotypes. Other 12 HR HPV genotypes were reported as Other HR HPV and were genotyped using an in-house qPCR method.

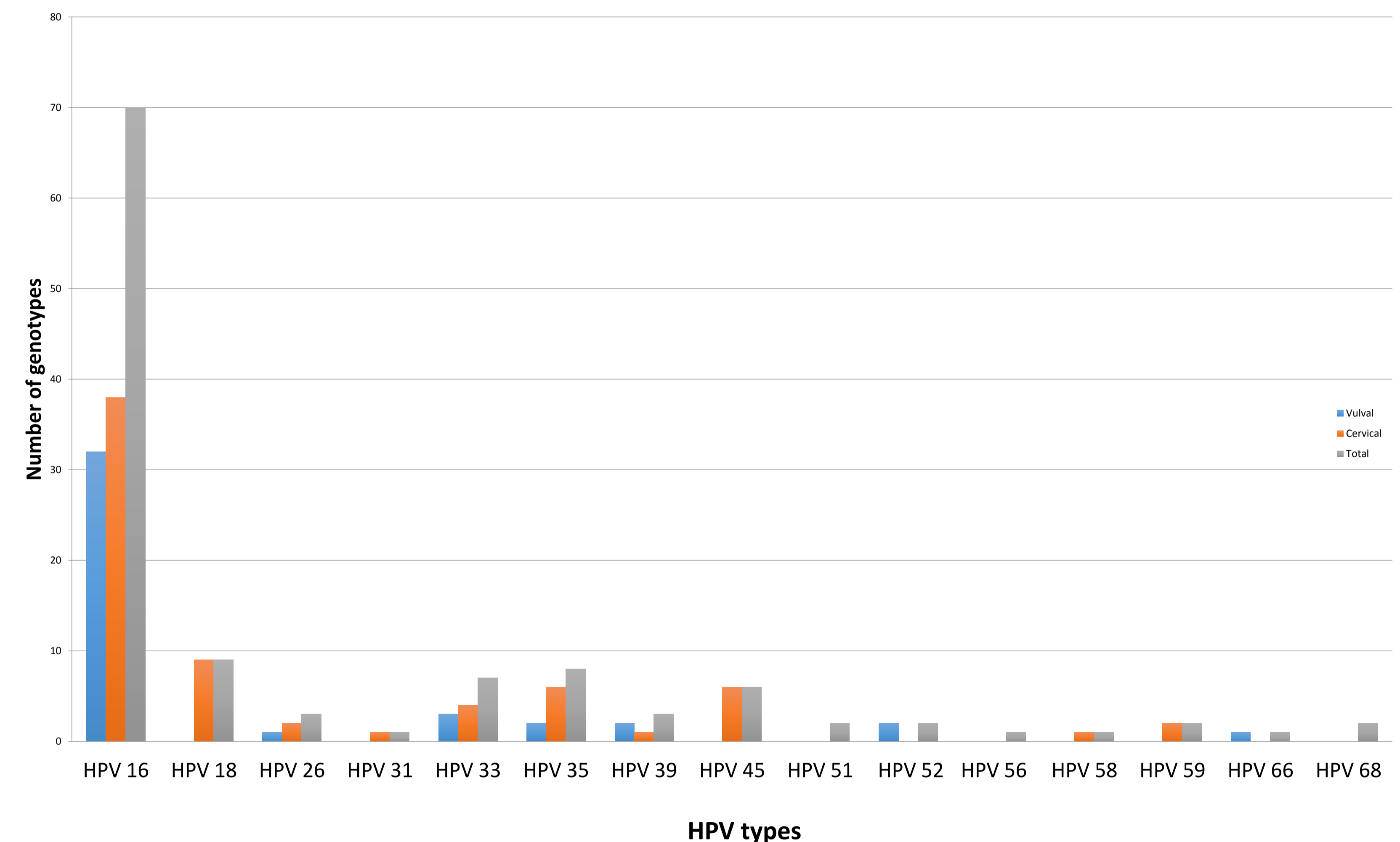


Figure 2 shows HR HPV prevalence in the study.

CONCLUSIONS

HPV 16 and other HR HPV were the most prevalent HPV genotypes in women with vulvar and cervical SCC and accounted for 65% of the HPV associated anogenital SCC in the study. HPV 18 was also seen in significant numbers in cervical SCC. This information will assist HPV vaccination strategies and selecting the best vaccine design for this study population in Botswana.

ACKNOWLEDGEMENTS

This project was funded by Abbott Company, South Africa. We also acknowledge funding from Dr. Scott Dryden-Peterson from Harvard Chan School of Public Health, Boston, USA.



