

Prevalence of Human Papilloma virus in women with Abnormal Cervical Smears from Sarawak, Malaysia

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ABSTRACT:

Introduction: Cervical cancer is common cancer and ranked in fourth place in both incidence and mortality worldwide. It is 3rd most common female cancer in Malaysia with a lifetime risk of 1 in 116. Infection with high-risk oncogenic human papillomavirus (HPV) is recognized as one of the substantial risk factors for the development of cervical cancers. **Methods:** It was a cross-sectional study conducted to determine the prevalence of HPV infection and its subtypes among women with various degrees of abnormal smears, who were seen in the colposcopy clinic of Sarawak General Hospital within six months' period from January to June 2018. We recruited 56 participants. There were 23 each for an atypical squamous cell of undetermined significance (ASC-US) and low-grade squamous intraepithelial lesion (LSIL) and 10 high-grade squamous intraepithelial lesion (HSIL). DNA was extracted, and HPV genotypes were determined via polymerase chain reaction (PCR) using two primer pairs MY09/MY11 and GP5+/GP6+. **Results:** The age ranged from 23 to 56 years, with a mean age of 42.96 years. HPV was detected in 20 out of 56 (35.7%). There were 6 high-risk oncogenic HPVs (18, 51, 52, 56, 58, 68) detected in participants and the most prevalent subtypes were 18, 52, and 58 (20% each). Four low-risk HPVs detected were 6, 53, 70, and 84. There was a significant association between the severity of cervical lesions and HPV positivity ($P < 0.004$). HSIL had the highest positive predictive value to have HPV infection as 70% compared to 43.4% of LSIL and 9.3% of ASC-US. **Conclusion:** Distribution of HPV subtypes from women with abnormal smears from Sarawak indicated a high prevalence of HPV 18, 52, and 58. We also identified HPV 70, which has never been reported in West Malaysia. These findings could contribute valuable information for HPV vaccination strategies, particularly for Sarawakian women.

Keywords: Prevalence, human papillomavirus, abnormal cervical smears, cervical cancer.

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