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Prevalence and genotype distribution of human papillomavirus in Amman, Jordan

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Background: Cervical cancer is the second most common malignancy in women and the leading cause of cancer-related deaths in females worldwide. Human papillomavirus is closely associated with cervical cancer. In Jordan, the incidence of cervical cancer is low and estimated to be around 50-60 women, while the mortality rate approaches 30-35 cases a year. This study aimed at determining the frequency of the Human Papillomavirus (HPV) infection in the Jordanian population, also studying the distribution of HPV genotypes and the extent of multiple HPV infections in women from Amman, Jordan.

Methods: During the period of September 2016 to March 2018, a total of 380 cervical samples from women attending the gynecologic clinic were obtained to determine the presence of HPV DNA. DNA was extracted using a commercial kit from Qiagen. HPV genotypes were detected via PCR using the consensus GP5+ GP6+ and MY09 MY11 primer sets. Genotypes were confirmed by a commercial real time PCR kit and a reverse line blot kit.

Results: Thirteen (13) samples were positive for the presence of different HPV genotypes (3.7%). Among the 13 positive samples 9 samples were positive for the high risk genotypes (69%), while 4 samples were positive for the low risk group (31%). One sample was positive for HPV 16 genotype (7.7%), whereas two samples were positive for HPV 18 genotype (15%).

Conclusion: The low HPV infection prevalence illustrated in this study and the limited resources in Jordan argues against introduction of population-based HPV testing and vaccination.

Biography

Ashraf I Khasawneh has obtained his MD in 2002 from the Faculty of Medicine at Jordan University of Science and Technology. He has conducted his PhD research under the guidance of Pantelis Poubourios in the Department of Microbiology at Monash University and graduated in 2012. Since 2012, he has been a Faculty Member in the Department of Basic Medical Sciences at the Hashemite University in Jordan where he is currently an Assistant Professor.

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