

Prevalence of High Risk Human Papillomavirus in Cervical Dysplasia and Cancer Samples from Twin Cities in Pakistan

Authors : Sana Gul, Sheeba Murad, Aneela Javed

Abstract : Introduction: Human Papilloma Virus (HPV) is small DNA virus mostly infecting mucosa and cutaneous keratinocytes. So far, more than 200 Human papillomaviruses are known. HPV have been divided into high- and low-risk on the basis of their oncogenic potential. High risk HPV is considered to be the main etiological cause for cervical cancer. Objective: Current study was designed to screen the local cervical cancer patients from the twin cities of Pakistan for the occurrence of high risk HPV. Methodology: A total of 67 formalin fixed paraffin-embedded samples of cervical cancer biopsies were obtained from the government hospitals in Islamabad and Rawalpindi. Cervical cancer biopsies were examined for the presence of HPV DNA. Polymerase chain reaction (PCR) was used for the amplification of a region in the HPV-L1 gene for the general detection of the Papilloma virus and for the genotype specific detection of high risk HPV 16 and 18 using the GP5/GP6 primers and genotype specific primers respectively. Results: HPV DNA was detected in 59 out of 67 samples analyzed. 30 samples showed the presence of HPV16 while 22 samples were positive for HPV 18 . HPV subtype could not be determined in 7 samples. Conclusion: Our results show a strong association between HPV infection and cervical cancer among women in twin cities of Pakistan. One way to minimize the disease burden in relation to HPV infection in Pakistani population is the use of prophylactic vaccines and routine screening. An early diagnosis of HPV infection will allow better health management to reduce the risk of developing cervical cancer.

Keywords : cervical cancer, Pakistan, human papillomavirus, HPV 16

Conference Title : ICVID 2016 : International Conference on Virology and Infectious Diseases

Conference Location : London, United Kingdom

Conference Dates : February 25-26, 2016