

# Molecular Screening of HPV in Cervical Cancer Patients: A Hospital Based Study

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## Abstract

**Introduction:** Cervical cancer is the malignancy of female genital tract and second major burden on women's health worldwide. Human Papillomavirus (HPV) is the most common sexually transmitted virus and causes cancer in cervix, vagina, penis, mouth, and throat and genital warts in both males and females. Association between high risk oncogenic HPV types 16 and 18 and cervical cancer is well established. **Material & Methods:** In present study, total 80 cervical cancer samples were collected from PGIMS, Rohtak, Haryana, India. These samples were screened to confirm the presence of HPV infection by using degenerate primers for L1 open reading frame of HPV genome. Positive samples for HPV infection were further studied by type-specific PCR for HPV 16, 18, 6, 11 and 33. Statistical analysis was performed by using Medicalc software version 18.9. **Results:** Our study found that 90% of the cervical cancer patients were infected with HPV virus and 80% were infected with high risk type HPV16 and 69% were infected with HPV18. In low-risk HPV's (HPV6, HPV11, and HPV33), we found that 6% cervical cancer patients were infected with HPV6, 7% infected with HPV11 and 28% were found infected with HPV33. **Conclusion:** Rural background, poor menstrual hygiene, age, age at marriage showed significant relationship with HPV virus infection. Present incidence of high-risk HPVs and low-risk HPVs in cervical cancer patients in our population is may be due to lack of awareness, lack of screening program and inaccessibility to hospitals which prevent the affected individuals from seeking medical help. Present study suggested, it is right time to target HPV by providing vaccines targeting HPV 16 and 18 in early age.