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Research abstract

Title: HPV imprints in western India: The overlooked criteria for cancer profiling

Authors: Thobias A. R.[1], Patel J. B.[2], Patel P.S.[3]

Affiliation:
[1]PhD student & SHODH Fellow; [2]SSO & Head; [3]Former Professor & Head
Molecular Oncology Laboratory, Cancer Biology Department,
The Gujarat Cancer and Research Institute, Asarwa, Ahmedabad, Gujarat, India-380016

Abstract:
Background: In India, HPV infection detection for cancer-typing has been largely evaded. Especially, data on prevalence of HPV types other than the highly prevalent HPV 16 and 18 are lacking, particularly from the western region. Thus, present study aimed to evaluate prevalence of HPV strains in three most prevailing cancers in India i.e. cervical, oral and oropharyngeal cancer.
Materials & methods: DNA was isolated from tissue samples of 400 cervical cancer cases, 127 oral cancer cases and 75 oropharyngeal cancer cases and endpoint PCR was performed using degenerative primers MY 09/11, GP 5+/6+ and CP I/II. TS-PCR was conducted to detect HPV 16, 18, 31, 33, 45, 52, 58, 6 and 11.
Results: Overall HPV infection was observed in 87% cases of cervical cancer, 12.5% of oral cancer and 26.7% of oropharyngeal cancer using degenerative primers. HPV 16 (72.5% in cervical cancer, 1.33% in oropharyngeal cancer), HPV 18 (14.8% in cervical cancer) and HPV 45 (2.3% in cervical cancer) were observed to be comparatively higher than the other HPV types. All the HPV types except HPV 11 were observed to be present in the studied cohort. HPV was also associated with younger age, well differentiated tumors with no lymph node metastasis.
Conclusion: Prominent prevalence of HPV infection was noted in studied population. The study represents need of awareness for HPV screening at clinical set-ups which will lead to upgraded profiling of cancers and better disease management. Moreover, current study provides supportive data for initiation of HPV vaccination programs in India.