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Association of human papilloma virus with head and neck cancer patients from Khyber Pakhtunkhwa, Pakistan

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Head and neck cancer (HNC) is the sixth most common cancer causing a high mortality rate worldwide. There are number of risk factors involved in head and neck cancer such as tobacco, alcohol, radiations, inhaling asbestos, wood dust, paint fumes and viruses. Most common virus involved in the subset of head and neck cancer is human Papilloma virus (HPV). Human papilloma virus is double stranded DNA virus which is about 8Kb surrounded by protein coat consisting of two proteins L1 and L2. Out of 100 different types of HPV 15 are considered as highly pathogenic. HPV is divided into two major types; High risk HPV and Low risk HPV. In current study 150 HNC patients were screened for HPV genotyping and risk factors possibly associated with HNC. DNA was extracted by standard phenol chloroform extraction method followed by HPV genotyping by polymerase chain reaction and agarose gel electrophoresis. In study, among the HNC affected individuals 81(54%) were HPV+ive and 69 (46%) HPV-ive. Statistically, no significant difference was observed between HPV+ive and HPV-ive. HNC cases in terms of gender. In terms of age group, statistically no significant difference was observed between two groups (age group >40, <40). With respect to anatomic site of head and neck cancer patients, highest number of HPV+iv was observed in oral cavity 51(63%) followed by pharynx 20(25%), larynx 7(8%) and hypopharynx 3(4%). Disease was more common among illiterate individuals with low socioeconomic status and trend of HPV+ive HNC cases have increased from year 2011 to 2016. It can be concluded from the data that HPV infection can be the main risk factor for HNC cases in Pakistan. Further research is needed to elucidate the mechanism involved in HPV infection with head and neck carcinogenesis.

Biography

Maimoona Sabir has completed her PhD from the Department of Biosciences, COMSATS, Institute of Information Technolgy, Islamabad, Pakistan. She is currently working as Assistant Professor in the Department of Microbiology, University of Haripur, KP, Pakistan. She has published more than 15 reserach papers in reputed journals. She has won grant from Higher Education Commssion of Pakistan for research work, "role of HPV in head and neck cancer in Pakistani population".

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