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Guest Editorial

Human Papilloma Virus

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Human papillomavirus (HPV) is a small DNA virus composed of an icosahedral viral particle. It has a genome of 8000 base pairs approximately surrounded by a protein capsid [1]. In sexually transmitted infections and venereal diseases including vaginal intercourse, oral sex and anal sex, HPV has become more common in adults and accounts for 11% of cancer incidence in women worldwide [2]. It has become more common in sexually transmitted diseases. There are many types of HPV that are specific for specific diseases, but HPV type-16 is associated with HNSCC [2]. HPV has genomic DNA and almost 15-20% of HNSCC has the genomic DNA which is present in HPV.

The distribution of HPV positive oropharyngeal cancer is highest in the tonsils, not frequently in the hypopharynx and very rare in the oral cavity.

In tonsils the HPV DNA is found in 45%-67% of the cases, in hypopharynx the HPV DNA is found in 13%-25% of the cases and in the oral cavity and larynx the rate is 12%-18% and 3%-7% respectively. This shows the variation of HPV infection with the site of the tumor [3]. Detection of HPV in head and neck squamous cell carcinoma depends on the methodology used and type of tissue examined. Yield of HPV DNA extracted from oral samples is usually low and hence, it is very important to adopt sensitive and accurate techniques.

In many studies HPV is thought to cause infection in stem cells within the basal layer of mucosa [4]. HPV replicates in the basal cells of the stratified epithelium [5]. If we compare tobacco users and never-tobacco users, it is concluded from a study that increased risk of diseases are found in tobacco users with advanced HPV+OSCC than never-tobacco users [6].

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