

## Study on the association between squamous cell carcinoma of larynx and HPV by PCR

Sharifi N. MD<sup>1</sup>, Omidi A. MD<sup>2</sup>, Tavakoli Y. MD<sup>3</sup>,  
Ghannadan A. MD<sup>4</sup>, Khodadust<sup>5</sup>

<sup>1</sup>Assistant Professor of Pathology, <sup>2</sup>Professor of Pathology, <sup>3</sup>Assistant Professor Immunology, <sup>4</sup>Resident of Pathology, <sup>5</sup>Biologist

### Abstract

**Introduction:** Abroad epidemiologic studies have suggested human papillomavirus (HPV) to be an etiological agent in Squamous cell carcinoma (SCC) of larynx. In this study we investigated the frequency of HPV 16 infection in various neoplastic and non-neoplastic laryngeal tissue.

**Materials and Methods:** The study was done on 55 cases of laryngeal SCC, 10 cases of dysplastic and 5 cases of normal tissues were analyzed by polymerase chain reaction (PCR) for the presence of HPV 16.

**Results:** None of the five normal and ten dysplastic laryngeal tissues showed the presence of HPV. Seven of fifty-five Squamous cell carcinoma of larynx (12.7%) were positive for HPV type 16.

**Conclusions:** The results suggested that HPV DNA has a major role in squamous cell carcinoma of larynx

**Keywords:** HPV, Squamous cell carcinoma, Larynx

### Introduction

Laryngeal Squamous Cell Carcinoma (SCC) is the most frequent malignant tumor in the head and neck. Human Papilloma Virus (HPV) has been implicated in proliferative and invasive lesions of the larynx (1-9).

More than 75 different HPV genotypes have been cloned, and categorized in low and high risk types. The low risk types are associated with benign lesions and high risk HPV genotypes have marked malignant potential and are frequently associated with epithelial dysplasia and Squamous Cell Carcinoma at several anatomic sites.

The low risk HPV-6 and 11 DNA sequences were detected in approximately 100% of Laryngeal Papillomatosis (10) and the high risk HPV (16,18) have been found in high percentage of Laryngeal Verrucous Carcinoma (11).

Although almost all epithelial cancers of head and neck and genital system harbour HPV DNA and the relationship between HPV and anogenital cancers have been clearly demonstrated in numerous studies, a putative relationship between HPV and Laryngeal Carcinoma is still controversial.

Sharifi N, MD.

Address: Mashhad University of Medical Sciences

Email: N\_sharify@mums.ac.ir

Acceptation date: 83/7/14 Confirmation date: 83/9/5