

---

## P-28; TRENDS IN EPIDEMIOLOGY OF HEAD AND NECK CANCER IN THE CZECH POPULATION

Eliška Mudrová<sup>1,2</sup>, Jan Klozar<sup>1</sup>, Martina Saláková<sup>2</sup>, Jana Šmahelová<sup>2</sup>, Ruth Tachezy<sup>2</sup>

<sup>1</sup>*Department of Otolaryngology Head and Neck Surgery, 1st Faculty of Medicine, Charles University, Prague, Czech Republic*

<sup>2</sup>*National Reference Laboratory for Papillomaviruses, Institute of Hematology and Blood Transfusion, Prague, Czech Republic*

**Background:** The most important causative factors of head and neck cancers are smoking and alcohol use. New data suggest that infection of high risk types of HPV (HR HPV) is an independent risk factor for oral and oropharyngeal carcinoma. In the Czech Republic the incidence of oral/oropharyngeal cancer has increased steadily in recent years.

**Objectives:** The aim of this study was to show the relationship between trends of alcohol and tobacco consumption and incidence of different locations of oral/oropharyngeal tumours in relation to HPV prevalence in different locations. We try to find epidemiological evidence that the increase in oral/oropharyngeal tumours incidence is at least partially due to the spread of HPV infection.

**Materials and Methods:** Retrospective data of incidence of oral and oropharyngeal carcinomas have been obtained from the Czech cancer registry. Retrospective data on alcohol consumption and tobacco smoking have been obtained from the Czech Statistical Office. The HPV prevalence was studied in head and neck tumours from cases treated between 2001–2007. Samples were analysed for HPV DNA presence by means of PCR.

**Results:** The incidence of tonsillar cancer has increased more than three fold since 1977 and this increase is more pronounced compared to that in tumours of other locations. The alcohol and tobacco consumption increased only marginally during the last 30 years. HPV DNA has been detected in 61.2% of tumours, HPV-16 accounted for 92.5% of positive tumours. HPV DNA prevalence was much higher in tonsillar cancer than in other locations.

**Conclusions:** These preliminary data suggest that the increase in the incidence of particularly tonsillar cancer cannot be attributed to the increase in the consumption of alcohol and tobacco but probably to the increase of the HPV infection in the population. The retrospective analysis of HPV presence in materials from the first part of studied period is necessary to support this hypothesis.

### **Acknowledgement:**

Supported by IGA MZ CR NR/9466-3.