**Rise in Tonsillar Cancers Parallels HPV Positivity**

**By Neil Osterweil**

**CHICAGO** — A threefold increase in the incidence of tonsillar cancer over 3 decades in Sweden was paralleled by a similar rise in the incidence of tumors positive for the human papilloma virus, the results of a cohort study indicate.

At the same time, however, survival rates in patients with tonsillar cancer also increased, possibly because of the higher proportion of HPV-positive cancers, which tend to have a better prognosis than other oral cancers, Dr. Hanna Dahlstrand said at the annual meeting of the American Society of Clinical Oncology.

The threefold increase in HPV-positive tumors is not known, although they could be related to a possible increase in sexual behaviors, particularly in urban centers, Dr. Dahlstrand said.

Sweden is a relatively small nation, but the results may be applicable to other countries, she noted. In the United States, for example, the incidence of HPV-related oropharyngeal squamous cell carcinomas has risen since 1973, whereas the incidence of squamous cell carcinomas at other oral sites has either remained constant or declined. In Finland, the incidence of tonsillar cancers doubled from 1956 through 2000.

HPV DNA has been shown to be present in 40%-75% of oropharyngeal cancers, compared with about 25% of all head and neck cancers.

It is only the high-risk types of HPV that are found, with at least 90% dominance of HPV-16, and the oncogenes on HPV, E6 and E7 are transcribed, she said. And there is a temporal correlation: Exposure to HPV-16 precedes by at least 9 years the diagnosis, and has been shown to be a strong risk factor for tumor development.

HPV-positive oropharyngeal cancers tend to occur more often in non-smokers and younger patients. Risk factors include multiple sexual partners, younger age at first intercourse, and oral sex. Several studies have shown that the presence of HPV positivity is associated with about a 30% reduction in 5-year mortality, said Dr. Dahlstrand of the department of oncology pathology at the Karolinska Institute in Stockholm.

She and her colleagues conducted a nationwide cohort study using the exhaustive clinical and demographic databases available to Swedish investigators. Their goal was to see whether there has been an increase in the incidence of tonsillar cancer in Sweden; to determine whether such an increase, if present, could be linked to the proportion of HPV-positive tumors; and to see whether the incidence of HPV-positive tonsillar cancers would have an effect on survival.

They identified a total of 2,165 tonsillar cancers, from 1,210,000 people that lived between 1970 and 2003, using the Swedish National Cancer Registry. To determine survival, the investigators used records from the Swedish Causes of Death Register, and checked them against the Swedish Emigration Registry to make sure that cohort members were not lost to follow-up. They identified a total of 1,180 survivors as of 2003.

The investigators also assessed the incidence of tonsillar cancer from 1970 to 2001 and survival in a Stockholm cohort, and used this cohort to control for treatment, tumor-node-metastasis stage, and cause of death. They identified 515 cases in this cohort, and 337 survivors as of 2003.

The study also provides an estimate of 203 biopsy samples and screened them for HPV using polymerase chain reaction testing; they then typed and sequenced the HPV to determine expression of the E6 and E7 oncogenes and expression of HPV-16.

There was also a significant increase in survival over the years that cannot be explained by earlier diagnosis. For instance, in the Stockholm cohort, tonsillar cancers increased from 1.3/100,000, or 2.6-fold, from 1970 to 2002. There was also a 2.9-fold increase in the proportion of HPV-positive tonsillar cancers during that same time period. This increase became significant for the 1990-2000 period, compared with 1970-1979 (P = 0.002), and remained significant for 2000-2002 (P less than .0001).

The mean 5-year survival rate for men with tonsillar cancer also increased in Sweden since the 1960s, from 32% to 53% and 79% in 1990-2001. The relative hazard ratio for death in the latest decade vs. the earliest was 0.50.

Women had a slightly better survival rate than men then and now, with the rate increasing from 40% in the ’50s to 60% in the ’90s and into 2001. Because women had better survival early on, however, the difference in relative hazard ratios was not quite as large as that for the cohort as a whole.

In the Stockholm cohort, in a Cox multivariate analysis adjusted for age, gender, stage, and treatment, the researchers found a similar significant rise in relative 5-year survival rates with a P value of 0.54 for 1990-2001, compared with 1970-1979. A lower proportion of stage I and II tumors in the ’90s, compared with the ’70s, suggests the improvement in survival over the years can't be explained by earlier diagnosis, Dr. Dahlstrand said.

Finally, when the investigators looked at survival by HPV status in the Stockholm cohort, they found that independent of age, gender, and stage, the hazard ratio for patients with HPV-positive tumors was 0.17.

In all, 49% of cases from 1973 to 2000 were HPV positive, and 90% dominance of HPV-16, and the presence of the E6 and/or E7 mRNA were found in 94% of assessable HPV-positive samples, Dr. Dahlstrand noted.

The findings show that about threefold increase in the incidence of tonsillar cancer was accompanied by about a threefold rise in the rate of HPV-positive tonsillar cancer. The proportion of the E6 and E7 oncogenes provides further evidence linking HPV to tonsillar cancers, she said.

The study funding source was not provided. Dr. Dahlstrand said she has no relevant financial disclosures.

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**HIV/AIDS Diagnoses Soar in Men Who Have Sex With Men**

**By Joel B. Finkelstein**

**WASHINGTON** — Widespread testing would likely blunt the high HIV infection rate in African Americans and Latinos, but little money and effort have been put into prevention efforts, said Dr. Madeline Sutton, of the Heightened National Council of La Raza and California Partnership for AIDS Research, at the National Minority Quality Forum’s 2008 Leadership Summit.

‘African Americans and Latinos suffer disproportionately from the HIV/AIDS epidemic,” said Dr. Sutton. The CDC’s effort is based on better understanding the barriers to testing. “A lot of issues have to do with stigma.”

Latino patients face similar barriers and more, added the stigma fueled by the immigration debate, said Brit Rios-Ellis, Ph.D., director of the Center for Latino Community Health, Evaluation, and Leadership Training, a partnership between the National Council of La Raza and California Partnership for AIDS Research.

The picture is not all bleak, according to Dr. Sutton. MSM aged 13-24 years saw the largest proportional increase in HIV/AIDS diagnoses. In this group, HIV/AIDS diagnoses increased by 256% (an estimated annual increase of almost 31%), Among MSM in this younger age group, the annual percentage increases in diagnoses were statistically significant in all ethnic/racial populations, with the exception of American Indian and Alaska Natives.

These findings underscore the need for continued effective testing and risk reduction interventions for MSM, particularly for those younger than age 25, according to the report.

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**HIV Testing, Treatment Age Most Warranted in Minority Populations**

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