In the nationwide cohort, there was a 2.04-fold increase in the incidence of tonsillar cancers, from 1.2/100,000 population to 2.4/100,000, 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 = 0.01), and remained significant for 2000-2002 (P less than 0.001). During the 2000-2002 period, the rate of HPV-positive tonsillar cancers increased from 3.6/100,000 in 1996 to 3.15/100,000 in 2001.

The authors also assessed the incidence of tonsillar cancer in Sweden 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 151 cases in this cohort, and 337 survivors as of 2001. They then tested to obtain 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 temporal connection: Exposure to HPV-16 precedes the diagnosis by at least 9 years and has been shown to be a strong risk factor for tumor development. The incidence of tonsillar cancers has risen since 1970, and HPV-positive tumors are not applicable to other countries, she said. The reasons for the increase in HPV-positive tonsil cancers are unknown, although they could be related to a possible increase in sexual behaviors, particularly in urban centers, Dr. Dahland 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 carcinoma has risen since 1973, whereas the incidence of squamous cell carcinomas at 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 linked with 90% dominance of HPV-16, and the oncogenes on HPV E6 and E7 are transcribed, she said. And there is a temporal connection: 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. Dahland 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 goals were 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 incident cases of tonsillar squamous cell carcinoma from 1960 through 2003, using the Swedish National Cancer Registry. To determine survival, the investigators used records from the Swedish Causes of Death Registry, and checked them against the Swedish Emigration Registry.

In the Stockholm cohort, tonsillar cancers increased from 1.3/100,000 to 3.6/100,000, 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 = 0.02), and remained significant for 2000-2002 (P less than 0.001). During the 2000-2002 period, the rate of HPV-positive tonsillar cancers increased from 3.6/100,000 in 1996 to 3.15/100,000 in 2001.

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

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

From 2001 through 2006, the number of HIV/AIDS diagnoses in men who have sex with men increased by nearly 9% in 33 states, with particularly high increases in black men and Asian/Pacific Islanders under age 25 years, according to the Centers for Disease Control and Prevention.

The CDC analysis of trends in HIV/AIDS diagnoses in men who have sex with men (MSM) estimated that 214,379 people were diagnosed with HIV/AIDS, of which 46% were among MSM and 4% were among MSM who also injected illicit drugs. Diagnoses during this time period dropped in all transmission categories except for MSM (MMWR 2007;56:861-86).

Of the cases of HIV infection among MSM, 64% were in men who were aged 25-44 years. There was a 12% increase in diagnoses in all black MSM. Diagnoses in black MSM aged 13-24 years increased by 93%, a rate that was about twofold greater than the rate of increase in white MSM in the same age group. Asian/Pacific Islanders aged 13-24 years saw the largest proportionate 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 racial/ethnic 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 years, according to the report.

Among the findings of the report, the 33 states are not representative of all HIV-positive people in the United States. However, the racial and ethnic disparities observed are similar to those observed for AIDS cases in all the states.

—Elizabeth Mehcalie