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Study Shows Dramatic Rise in Oral Cancer Linked to HPV [1]

Posted online October 3, 2011 on www.jco.org [2].

A new study has shown that rates of oropharyngeal cancer, a type of oral cancer, have been increasing dramatically in the United States since 1984, with human papillomavirus (HPV)-related tumors accounting for a growing majority of all new cases. Researchers showed that the proportion of oropharyngeal cancers that were HPV-positive significantly increased over time, from slightly more than 16 percent of such cancers diagnosed during the 1980s to more than 70 percent diagnosed during the 2000s.

The findings could have potential implications for both treatment and cancer prevention. The main type of HPV that causes oropharyngeal cancer - HPV16 - is also a target for HPV vaccines given as a preventative measure against cervical cancer.

The oropharynx is the middle part of the throat behind the mouth, and includes the base of the tongue, the soft palate, the side and back walls of the throat and the tonsils. Studies have shown that oropharyngeal cancers can be divided into two separate diseases with distinct causes: HPV-negative cancers, which are associated with tobacco and alcohol use; and HPV-positive cancers, which are linked to risk factors associated with sexual behavior. Patients with HPV-positive oropharyngeal cancer also tend to be male and younger than those who are HPV-negative. Clinically, patients with HPV-positive cancer have better survival compared to those with HPV-negative disease.

The researchers previously showed that incidence and survival rates for oropharynx cancers significantly increased in the U.S. from 1973 to 2004, whereas the incidence rates for other head and neck cancers, such as oral cavity cancers, declined during that period.

To find out whether HPV infection was involved, researchers tested 271 archived oropharynx cancer tissue samples for HPV infection collected between 1984 and 2004 at three cancer registries. Using a variety of tests and techniques, the investigators showed that the proportion of oropharynx cancers that were HPV-positive dramatically increased over time, from 16.3 percent for cancers diagnosed during the 1980s (1984 to 1989) to 72.7 percent for cancers diagnosed during the 2000s (2000 to 2004).

They discovered that after only 16 years (1988 to 2004), the incidence of HPV-positive cancers

had increased 225 percent. HPV-negative oropharyngeal cancers declined by 50 percent during that same time. The study shows that if current trends continue, then HPV-related oropharyngeal will become the major form of head and neck cancer and the leading HPV-associated cancer in the U.S., passing cervical cancer, by 2020.

Nearly all HPV-positive oropharynx cancers are caused by one type of HPV, which is targeted by currently available vaccines for cervical cancer prevention. The authors suggest that such vaccines could potentially have a role in oropharyngeal cancer prevention, but that studies are needed to evaluate the vaccines' ability to prevent oral HPV infections.

While clinically both groups of oropharyngeal cancers seem the same, they appear different under the microscope, and treatment is different for each.

What this Means for Patients

This study shows that an increase in the rate of infection with the human papillomavirus - HPV - has led to a dramatic rise in a type of oral cancer. Patients should be aware that this infection is becoming more common, and that treatment for such cancers may be determined according to HPV status. The good news is that HPV-related oropharyngeal cancer tends to respond better to treatment than do HPV-negative cancers, and this is linked to overall improved survival for the disease over time. In addition, new prevention measures for these cancers may be developed.

Helpful Links

[Guide to Oral and Oropharyngeal Cancer \[3\]](#)

[HPV and Cancer \[4\]](#)

Links:

[1] <http://www.cancer.net/study-shows-dramatic-rise-oral-cancer-linked-hpv>

[2] <http://www.jco.org/>

[3] <http://www.cancer.net/patient/Cancer+Types/Oral+and+Oropharyngeal+Cancer>

[4] <http://www.cancer.net/patient/All+About+Cancer/Cancer.Net+Feature+Articles/Cancer+Screening+and+Prevention/HPV+and+C>