HPV's Link to Head and Neck Cancer Examined

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SAN FRANCISCO — While the relationship of the human papillomavirus to cervical cancer is well known among the public and in the medical profession, it is less commonly recognized that oral HPV appears to be associated with head and neck cancers. Even among the cognoscenti, there is a good deal of confusion about the details of this association.

At the Seventh International Conference on Head and Neck Cancer, Dr. Maura L. Gillison of Johns Hopkins University, Baltimore, reviewed current studies to answer some of the most frequently asked questions about HPV and cancers of the head and neck:

HPV-16 accounts for about 54% of all cervical cancers, but in one study there was a 92% association with cancers of the head and neck.

▶ **Which HPV types are most associated with cancers of the head and neck?** HPV-16 is the most common cause of cervical cancer, accounting for about 54% of these cancers, followed by HPV-18 and HPV-45. HPV-16 may be even more prominent among cancers of the head and neck, with a 92% association in one study.

▶ **What risk of cancer is associated with oral HPV infection?** Published studies show little agreement on the magnitude of the risk associated with oral HPV-16, although all the studies that Dr. Gillison reviewed found statistically significant increases. The odds ratios in published studies range from 1.7 for all the head and neck cancers to 32.3 for cancers of the oropharynx to 99.3 for cancers of the tonsil. Dr. Gillison estimated the overall increase in the risk of oropharyngeal cancer from HPV-16 infection to be about 15-fold over the risk in people who are not infected.

▶ **How common is oral HPV infection?** Estimates of the prevalence of HPV infection in control populations range from 3% to 18%.

▶ **What are the risk factors for oral HPV infection?** As in urogenital infection, sexual behavior appears to be the prime culprit in oral HPV infection, although peripartum transmission has been documented. Several studies have found HPV-16–positive head and neck cancers to be associated with a history of sexually transmitted disease, a history of casual sex, infrequent condom use, infrequent barrier use during oral sex, the number of sexual partners, and the number of oral sex partners.

▶ **How does oral infection relate to cervical infection?** Oral HPV infection is about three times as likely in women with cervical infections, but in the overwhelming majority of these women—94% according to one study—different types of HPV are responsible for their oral and urogenital infections.

▶ **How long is a patient with HPV-positive cancer infectious?** Studies have found oral HPV infections to persist for about 2 years following treatment for head and neck cancers. These infections have not been associated with recurrences or second primary cancers, however.

▶ **Will the HPV vaccine have any effect on oral HPV infection?** There is no direct evidence bearing on this question, but the indirect evidence is encouraging. Following vaccination, HPV-16 IgG can be detected in oral fluid, and oral HPV-16 is seropositive with cervical HPV-16.

Dr. Gillison serves as a consultant to, receives research funding from, and collaborates with scientists employed by Merck & Co. The conference was sponsored by the American Head and Neck Society. ■

Renowned Educator Gets Lifetime Award

The Dermatology Foundation has conferred its Lifetime Career Educator Award on Dr. Irwin M. Braverman, professor of dermatology at Yale University School of Medicine. According to the foundation, "The award celebrates Dr. Braverman's distinguished career and the high standard he has set for the next generation of teachers in all areas of dermatology." For more information, visit www.dermatologyfoundation.org, and select Press. ■