HPV Vaccine: Still very safe, and may help protect against oral cancer

By ACSH Staff — July 9, 2014

Vaccines that protect adolescent girls and women from the human papillomavirus (HPV) and from developing cervical cancer may also help prevent oropharyngeal cancers. [1] Worldwide the incidence of oropharyngeal cancer is estimated to be about 85,000 annually, and domestically 12,000 new cases are diagnosed each year. This type of cancer originates where the oral cavity and the pharynx meet, and may result from various independent risk factors such as tobacco use, alcohol use, and HPV infection.

Since HPV infection alone can be a direct cause for oropharyngeal cancers, researchers investigated the prevalence of HPV types among oropharyngeal cancers in the United States. In doing so, they wished to establish a pre-vaccine baseline to measure the effect of vaccination on oropharyngeal cancer incidence.

Lead author Dr. Martin Steinau, from the Centers for Disease Control and Prevention (CDC) and his colleagues extracted viral DNA from tumor tissue samples. The specimens were accrued over a ten-year period from cancer registries and Residual Tissue Repository Program sites in the United States. The analysis showed that of the 557 invasive oropharyngeal cancer samples, 72 percent tested positive for HPV. Among those viral-positive samples, about two thirds contained HPV-16 and HPV-18 strains which are also commonly linked to cervical cancer.

As such, the authors believe [2], Currently available HPV vaccines targeting HPV-16 and -18 may be highly effective against oropharyngeal squamous cell carcinoma. The researchers also describe another 9-valent vaccine that includes strains in the existing quadrivalent vaccine (HPV-6, -11, -16, and -18) and 5 additional cancer-related strains (HPV-31, -33, -45, -52, and -58) that is now under clinical trial testing. Therefore, the authors think, the two FDA approved HPV vaccines targeted for the HPV-16 and HPV-18 as well as the potential 9 valent formulation may be effective in reducing oropharyngeal cancer incidence.
The study notes the limitations of the evaluation, including that their current analysis does not prove a causal role of HPV in oral cancer development. However, determining the presence of the virus in tissue samples does set up clinical interventions should there be a more direct relationship established between the virus and oral cancer in the future.

The HPV vaccine has been available to patients since 2006 when the FDA first approved Gardasil. Since then another similar formulation Cervarix has also been introduced to the market. Despite safety concerns and religious opposition to these vaccines, they remain the standard of prevention for cervical cancer in females. In fact, their safety continues to be bolstered as a recent study confirms [3] Gardasil vaccination does not increase the risk of blood clots.

The medical director of Australia s National HPV Vaccination Program Register, Dr. Julie Brotherton states, This study provides even more evidence that HPV vaccination is very safe. Early American studies, which were based on reports coming in from people who were vaccinated, had suggested that there may be an increased chance of blood clots occurring after HPV vaccination. This large study based on five years of vaccination in the Danish population very elegantly analyses this issue and robustly refutes the presence of any association between HPV vaccination and blood clots. We can now feel very confident in stating that the HPV vaccine is very safe.

ACSH s Dr. Gil Ross added this comment: The real tragedy regarding HPV vaccine is that even today, despite all the evidence of its safety and efficacy, and all the public-health education/information campaigns, the rate of HPV vaccination among our teens and young adults is abysmally low. The damage will come later, when the unvaccinated youngsters of today fall victim to various dangerous diseases in twenty, thirty or more years from now. More urgency in getting middle- and high-school kids vaccinated both boys and girls is needed.


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