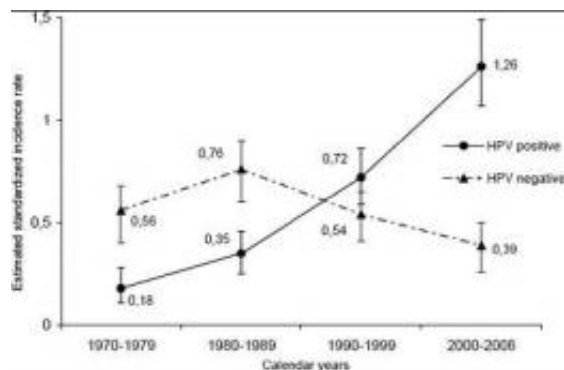


Study reveals sharp increase in HPV-positive tonsil cancer

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Increase in HPV-positive tonsillar cancer cases.

(PhysOrg.com) -- The number of cases of tonsil cancer continues to increase, according to a new Swedish study from Karolinska Institutet, with diagnoses tripling since 1970. The results of the study, which mainly cover the Swedish capital of Stockholm, show that this increase is directly linked to the human papillomavirus (HPV).

"The number of cases of tonsillar carcinoma is rising throughout Sweden, but the link to HPV has so far only been studied in Stockholm," says Professor Tina Dalianis, one of the researchers behind the study. "However, Stockholm is a typical European city so we suspect that the results indicate a general trend."

Tonsillar carcinoma is the most common form of oropharynx cancer in

Sweden. Because the tumours produce so few symptoms, patients seek medical care when the disease is relatively advanced, often after the tumours have spread to the lymph glands of the throat, possibly making the prognosis much worse. It has long been known that smoking and drinking alcohol are the greatest [risk factors](#) of tonsil cancer. More recent studies, however, have demonstrated a link between HPV and tonsil cancer, so that today an HPV infection is also one of the established risk factors. HPV is a virus that can cause skin warts and condyloma, and to date over a hundred different HPV types have been identified some of which are therefore carcinogenic.

A research group at the medical university Karolinska Institutet has monitored people in the Stockholm County region who were diagnosed with tonsil cancer between 2003 and 2007. The results, which are published in the International Journal of Cancer, show that the rise in the number of tonsil cancer cases in the region is attributable to HPV infection. By analysing biopsies from 98 of the 120 patients, the researchers were able to show that 83 of the cases were HPV-positive, primarily as regards the virus type HPV16.

There are considerable differences between HPV-positive and HPV-negative tonsil patients. For example, people with HPV-positive tumours are roughly ten years younger when the disease is diagnosed, and they have a much better prognosis. Eighty-one per cent of the HPV-positive patients have a five-year survival rate, as opposed to 36 per cent of the HPV-negative patients. Since 1970, the cumulative incidence of HPV-positive tonsil cancer has increased from 23 to 93 per cent, while the number of HPV-negative tumours has decreased. Scientists believe that this latter effect is down to a corresponding drop in the number of smokers.

Professor Dalianis believes that if the trend continues, almost all tonsil cancer in the Stockholm region will be HPV-positive, just as it is with

cervical cancer, for which 99.7 per cent of cases are HPV-positive.

"What we're seeing today is the result of infections that occurred roughly 20 years ago," she says. "The prognosis is obviously better for the HPV-positive patients, but the treatment is still arduous."

In light of this new knowledge, Professor Dalianis and her group now want to study how different types of treatment impact on the diagnosis and side-effects for HPV-positive and HPV-negative patients. They also hope to discover if the new HPV vaccine, which in Sweden will be given to all girls in between the ages of ten and twelve as of 2010, also protects against HPV infections in the oral cavity. The new HPV vaccine protects against HPV types 16 and 18.

More information: Incidence of human papillomavirus (HPV) positive tonsillar carcinoma in Stockholm, Sweden: An epidemic of viral-induced carcinoma? *International Journal of Cancer*, E-pub ahead of print feb 2009

Provided by Karolinska Institutet ([news](#) : [web](#))

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