

Some types of papilloma virus might prevent cervical cancer

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(Medical Xpress)—Certain types of papilloma virus might actually prevent cervical cancer, according to a new study by researchers from The University of Manchester.

There are over 100 different types of [human papilloma virus](#) (HPV). [Cervical cancer](#) is known to be caused by infection with approximately 14 so-called "high-risk" types of this virus. Researchers from Manchester looked at the different types of HPV found in cervical smears and invasive cervical cancers from HIV positive and HIV negative [women](#) in Kenya. They found high numbers of a specific type of HPV (type 53) in normal cervical smears from HIV positive women, but this was rarely found in HIV negative women. This sub-type was also never found in cervical cancers from either HIV positive or negative women.

Dr Ian Hampson, a Senior Lecturer in Viral Oncology from The University of Manchester who lead the study, said: "It is well known that HIV increases the number of different types of HPV found in any one patient which implies that HIV opens the door for infection with multiple types of HPV. If only high-risk types are present these will undoubtedly accelerate progression to cancer whereas if other types (eg type 53) are also present they may actually compete with the high-risk types to inhibit progression to cervical cancer."

There are 270,000 deaths from cervical cancer globally each year with 85% of these occurring in countries with low resources. In Kenya it is

the most common [malignancy](#) accounting for between 18 and 23 per cent of all diagnosed cases of cancer.

The study looked at women at samples taken from women in Kenya and results were analysed at The University of Manchester's Viral Oncology Laboratories based at the Saint Mary's Hospital. Completed by Dr Ian Hampson, Dr Lynne Hampson and Dr Innocent Orora Maranga the results have been published in *The Open Virology Journal*.

Dr Hampson said the study suggested one possible explanation for why, in spite of a large increase in the numbers of [HPV infections](#) in HIV positive African women, there was not a corresponding increase in numbers of cases of cervical cancer. This could also explain why another African study had actually shown the risk of developing one specific type of cervical cancer actually dropped in HIV-positive women, he said.

The researchers now plan to do more research in this area. "Our study was quite small and more research with larger sample numbers is now needed," Dr Hampson said. "We also need to work out exactly how one type of HPV might suppress the cancer causing properties of another. If it can be proved that HPV type 53 can inhibit the cancer-causing properties of other high-risk types of HPV, this could potentially form the basis of a simple biological therapy to prevent this disease. This could be extremely useful in low resource countries who cannot afford expensive HPV vaccines."

More information:

www.ncbi.nlm.nih.gov/pmc/articles/PMC3594704/

Provided by University of Manchester

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