Surprising news about HPV cancer screening and HPV vaccine

By ACSH Staff — November 4, 2013

American and European women have been screened using the Pap test to detect cervical cancer and precancerous cellular changes for decades, with a major decline in mortality from the disease as a result (cervical cancer remains a leading cancer killer in the Third World, however). Over the past few years, as evidence proving the causal link between human papillomavirus (HPV) and cervical cancer became clear, researchers looked into studying whether finding HPV infection might be an even more reliable biomarker for incipient cervical disease including whether the absence of HPV infection could provide assurance of the absence of cervical disease.

Now, a new trove of data from four large European randomized trials comprising over 175,000 women gives substantial evidence that HPV testing is superior to the Pap smear to protect women from dangerous cervical cancer (CCa). Studies from Sweden, the Netherlands, England and Italy showed that the death rate from CCa among women screened via HPV testing was about two-thirds lower than the comparator (control) group who were screened with the Pap smear. The subjects ranged in age from 20 to 64, and were followed for an average period of six and one-half years. Other salient facts included that the most impressive protection was in the age group 30-35, and that the HPV test was most predictive if done every 5 years, while the Pap smear is done every 3 years.

Even more good HPV news: a new study done in Costa Rica, published in Cancer Prevention Research, supports the possibility that one dose of HPV vaccine may provide almost as good protection from the viral infection as the recommended three-dose schedule. Called the Costa Rica HPV 16/18 Trial (CVT), the researchers, were led by Dr. Mahboobeh Safaelan of the National Cancer Institute in Bethesda, MD. They administered HPV vaccine containing the known cancer-causing strains 16 and 18, in either one-, two- or three-dose regimens to 78, 192, or 120 women, respectively; they assayed antibody responses and compared those levels to women who had evidence of natural immunity (due to prior infection) to HPV 16 and 18.

Over the course of the 4-year study, the antibodies produced remained higher than those among the women with natural immunity although the levels were significantly higher in the 3-dose group
than the others, and the 2-dose group had higher levels than the one-dose.

This does not prove that adequate protection from persistent HPV infection is present, and of course it says nothing about protection from non-16/non-18 type strains, which can also cause cancer and other diseases, albeit much less commonly.

Expert commentators, cited on MedPage Today, had this to say:

Robert Morgan, MD, of City of Hope in Duarte, Calif., said eliminating vaccine boosters would substantially decrease the cost of immunization and substantially improve compliance. The findings build on previously reported evidence and could have major public health implications, said Sarah Temkin, MD, of the University of Maryland in Baltimore. "Adherence to all three injections of the vaccine is low. In Baltimore, for example, completion rates range from 20% to 38.3%. From a public health perspective, it is reassuring that the women who are not completing all three recommended injections may still be well protected against HPV-related diseases."

ACSH’s Dr. Gilbert Ross added, We have been concerned over the years at the very low rate of HPV vaccination among young women and girls, especially. This report would be very good news indeed, indicating that even one shot may be sufficiently protective during the most vulnerable years for acquiring HPV infection.

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