

HPV Vaccine and Cervical Cancer

Cervical cancer is a major cause of cancer death among women worldwide, especially in developing countries, where screening is not carried out routinely. Human papillomavirus (HPV) 16 and 18 are found in 70% of cancer cases; HPV 45 and 31 are responsible for an additional 10% of cases.^{1,2} Although current cervical cancer screening methods have contributed to a considerable decrease in mortality from squamous cell carcinoma, they fail to detect many cases of cervical adenocarcinoma. A HPV 16/18 L1 virus like particle (VLP) candidate vaccine containing a unique adjuvant system, AS04, has demonstrated excellent immunogenicity, efficacy and an acceptable safety profile in women aged 15-25 years for up to 4.5 years after vaccination against incident and persistent HPV 16/18 infection and associated cytological abnormalities. Excellent immunogenicity and an acceptable safety profile have also been observed in women in a broad age range (10-55 years). If the HPV-16/18 L1 AS04 candidate vaccine is administered to adolescent girls before exposure to HPV, it has the potential to prevent a substantial number of cervical cancer and cervical lesions.³ In addition, a sexually active woman may continue to be exposed to oncogenic HPV throughout her lifetime. Therefore, vaccination of older women may also decrease the burden of cervical cancer.

Until recently, screening was the only available method to reduce the morbidity and mortality of cervical cancer. In 2006, a HPV-16/18/6/11 vaccine indicated for prevention of genital warts, cervical cancer and cervical, vulvar and vaginal dysplasia in females aged 6-26 years was approved for use in many countries worldwide, including the USA (Gardasil, Merck and Co., Inc., NJ, USA). A HPV-16/18 candidate vaccine containing the novel adjuvant AS04 for prevention of cervical cancer (Cervarix™, GlaxoSmithKline, Rixensart, Belgium) is in last-stage development and regulatory applications have been submitted in some countries. Epidemiologic studies in the coming years will be required to determine the impact of HPV vaccines on cervical cancer morbidity and mortality.⁴

REFERENCES

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