

Vaccine shows promise in preventing mono

10 December 2007

A new study suggests that a vaccine targeting Epstein-Barr virus (EBV) may prevent infectious mononucleosis, commonly known as “mono” or “glandular fever.” The study is published in the December 15 issue of *The Journal of Infectious Diseases*, now available online.

EBV is a member of the herpes virus family and one of the most common viruses in humans, with nearly all adults in developed countries such as the United States having been infected. EBV is often asymptomatic but commonly causes infectious mononucleosis, with 30 to 40 percent of adolescents who contract the virus developing the disease.

EBV is also associated with a number of other diseases, some of the most serious being lymphomas and other lymphoproliferative diseases in people with compromised immune systems, such as transplant patients. Despite the frequency of EBV infections and infectious mononucleosis, the new study is the first to suggest the efficacy of a vaccine in preventing infectious mononucleosis.

The study was conducted by Etienne M. Sokal, MD, PhD, and colleagues at several Belgian institutions and pharmaceutical companies. The vaccine targets glycoprotein 350, a protein that facilitates the entry of EBV into immune system cells. In this preliminary, Phase II clinical trial, 181 young adults who had not previously been infected by EBV received three doses of either a placebo or the vaccine.

During the 18-month observation period, the proportion of symptomatic EBV infections was reduced from 10 percent (nine out of 91) in the control group to 2 percent (two out of 90) in the vaccinated group, indicating that those who did not receive the vaccine were almost 5 times more likely to develop infectious mononucleosis.

With these promising results in a small group of subjects, Dr. Sokal suggested the next step should be “large-scale studies on the benefit in healthy

subjects and ability to prevent acute EBV infection and post-transplant lymphoproliferative diseases in transplant patients.” He added, “There is currently no possibility to prevent or to treat acute mononucleosis, which has remained so far an unmet medical problem. This vaccine may decrease the socio-economic impact of acute mononucleosis.”

Development of an EBV vaccine has had a slow and problematic history. These results suggest that the prevention of infectious mononucleosis is possible, and provide a framework for future trials looking to prevent more serious consequences of EBV infection.

In an accompanying editorial, Henry H. Balfour, Jr., MD, of the University of Minnesota Medical School, noted the importance of such studies on EBV vaccines, especially because “the worldwide disease burden due to EBV is enormous.” Balfour agreed that these findings should stimulate future research and larger clinical trials on the prevention and treatment of diseases associated with EBV.

Source: Infectious Diseases Society of America

APA citation: Vaccine shows promise in preventing mono (2007, December 10) retrieved 16 October 2021 from <https://medicalxpress.com/news/2007-12-vaccine-mono.html>

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