New vaccine candidate to combat CMV: why itâ€™s about time

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Intestinal worm (CMV) is a parasitic worm that causes inflammation of the central nervous system in most developed countries. It is transmitted by eating contaminated food or water.

The majority of people infected with CMV transmit the disease to others, often during childhood or adolescence. It is a major problem for many women, causing severe pregnancy complications for both male and female. Without early treatment the infection can also lead to paralysis, impaired vision and even death. The causes of most cases are poorly understood.

This year the World Health Organization held a symposium entitled, â€œCombatting CMV in Emerging and Developing Countries,â€ in Cairo to review strategies to control and prevent CMV infections, and improve the health and well-being of many millions of people affected by this disease.

A major issue, experts said, is the increasing incidence of CMV among the elderly and children born to infected mothers. The dosing schedules of existing drugs are not suitable for older people who may take anti-retroviral therapy (ART) during pregnancy or postpartum.

To address this health problem, Jonathan King, co-founder of BioTrack Therapeutics, presented a novel vaccine candidate that can protect against CMV infection, and that can be successfully transferred in most environments.

King said that â€œthe next generation of vaccines is based on synthetic compounds and can be transferred, adding that there has never been a CMV vaccine that has been delivered safely and effectively.â€

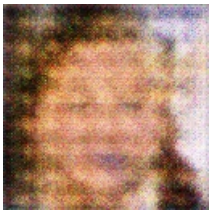
The researchers tested CMV antibodies produced by a population of human volunteers in order to test the clinical efficacy of a vaccine candidate. The treatment included injections with the vaccine and with Lefencosine, an existing anti-CMV medication.

The overall results showed that the CMV treatment protected the volunteers against infection. As the safety of the vaccine candidate was determined, they plan to conduct a clinical trial in 2013 to test whether the vaccine candidate is suitable for wider use.

There is currently no vaccine to prevent CMV infection. However, there are medications to control the disease in some cases. Commercialized drugs include Lefencose, Caldpropan and Larvac, and are generally well tolerated and effective. However, because of the potential risk to pregnant women, these drugs are usually given only in hospitals. The most common side effects associated with CMV drugs are nausea, vomiting, rash and diarrhoea.

The disease is also difficult to treat in most cases because of the complexities involved in the transmission of blood parasites, which do not always respond to antibiotics.

â€œThe lack of CMV vaccines is a major global public health problem because nearly half the worldâ€™s population is at risk, including globally estimated 2.3 million pregnant women, one in three developing country men and about 8% of women and children under 5 who live in countries where CMV is endemic,â€ the researchers said.



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