

Vaccine can prevent TB infections in adolescents

The results will be announced on Tuesday at the 5th Global Forum on TB Vaccines in Delhi.

A clinical trial has provided encouraging new evidence that TB vaccines can prevent sustained infections in high-risk adolescents. The results will be announced on Tuesday at the 5th Global Forum on TB Vaccines in New Delhi.

Subunit vaccine

In the Phase 2 trial conducted in South Africa, revaccination with the Bacille Calmette-Guerin (BCG) vaccine significantly reduced sustained TB infections in adolescents. An experimental vaccine candidate, H4:IC31, also reduced sustained infections, although not at statistically significant levels.

However, the trend observed for H4:IC31 is the first time a subunit vaccine has shown any indication of ability to protect against TB infection.

The study was conducted to evaluate the safety and immunogenicity of the vaccine regimens, as well as their ability to prevent initial and sustained TB infections among healthy adolescents in the Western Cape Province of South Africa.

Ann Ginsberg, MD, PhD, Chief Medical Officer at Aeras and a member of the organising committee for the 5th Global Forum on TB Vaccines, said: "We and our partners will share a range of new data at the 5th Global Forum on TB Vaccines, highlighting the scientific progress being made to develop potential new vaccines against TB, the world's leading cause of death from an infectious disease."

According to the World Health Organisation, about one-third of the world's population has latent TB infection, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit the disease. People infected with TB bacteria have a lifetime risk of falling ill with TB of 10%. People ill with TB can infect 10-15 other people through close contact over the course of a year. Without proper treatment, 45% of HIV-negative people with TB on average and nearly all HIV-positive people with TB will die.

Mark Hatherill, MD, Director of the South African Tuberculosis Vaccine Initiative (SATVI) at the University of Cape Town, and the study's principal investigator, said: "We are pleased to have performed the first-known randomised, placebo-controlled prevention-of-infection trial for TB and to have demonstrated that vaccination has the potential to reduce the rate of sustained TB infection in a high-transmission setting. While neither vaccine proved to be statistically significant in preventing an initial TB infection, we are extremely encouraged by the signals observed for both vaccines in preventing sustained TB infections.

"We believe the results from this novel trial design will provide significant scientific benefit to the field in understanding TB infection, and based on this positive signal, we look forward to testing the potential of such vaccines to prevent TB disease among uninfected adolescents in a larger, more traditional prevention-of-disease clinical trial."

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