

New meningitis vaccine protects against epidemic strain

September 11 2013

One shot of MenAfriVac dramatically reduced incidence of all cases of meningitis by 94% and carriage prevalence of the epidemic strain by 98%, while an epidemic persisted in unvaccinated parts of Chad.

"Until now, it was not known definitively whether MenAfriVac had a major impact on the incidence of serogroup A epidemics and carriage", explains lead author Professor Brian Greenwood from the London School of Hygiene & Tropical Medicine.

"Before this study, mass vaccination campaigns in countries such as Burkina Faso had shown MenAfriVac to be safe and highly effective, resulting in the lowest number of confirmed [meningitis](#) A cases in over a decade. But in Burkina Faso the vaccine was introduced at a time of falling incidence rates and decreasing transmission, potentially enhancing its true effect and making it difficult to study the vaccine's impact."

This new study by the African Meningococcal Carriage Consortium was designed to compare the effect of MenAfriVac, a meningococcal A conjugate vaccine, on meningitis and meningococcal carriage in vaccinated and unvaccinated regions at the same time during an epidemic.

Deadly epidemics of meningitis A occur regularly in Africa's meningitis belt, a band of 21 countries extending from Senegal to Ethiopia, where around 450 million people are at risk.

The researchers compared incidence rates between individuals aged 1-29 years vaccinated with one dose of MenAfriVac in December 2011 in three regions of Chad (roughly 1.8 million individuals vaccinated) and individuals in the remaining unvaccinated parts of the country.

During the 2012 [epidemic](#) season, the incidence of meningitis of any kind in the three vaccinated regions was 2.47 per 100 000 (57 cases in the 2.3 million total population), compared with 43.8 per 100 000 (3809 cases per 8.7 million population) in areas without mass vaccination.

What is more, despite enhanced surveillance, not a single group A meningitis case was identified in the three vaccinated regions, while 59 cases were confirmed in unvaccinated areas.

A further study of meningococcal carriage—in an age-stratified sample of residents from the rural area of Mandelia—identified 32 serogroup A carriers in 4278 residents 4 months before immunisation, and just one serogroup A case in 5001 people tested 4–6 months after the vaccine was introduced.

The authors point out that the absence of meningitis cases in residents of the vaccinated areas either too old (30+ years) or too young (

Citation: New meningitis vaccine protects against epidemic strain (2013, September 11) retrieved 26 April 2024 from <https://medicalxpress.com/news/2013-09-meningitis-vaccine-epidemic-strain.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.