

DRUG COMBO REGIMEN CAN TREAT FATAL SCRUB TYPHUS CASES BETTER, SAY INDIAN RESEARCHERS

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A trial at Christian Medical College, Vellore, found that combination therapy was superior to therapy with intravenous doxycycline or azithromycin alone. [File](#) | [Photo Credit](#): The Hindu

Researchers have identified a better drug treatment for 'severe scrub typhus,' a life-threatening bacterial infection, which may lead to more lives being saved among those who get infected. Scrub typhus is transmitted to humans through tick bites. Agricultural labourers are at a major risk of infections due to exposure to shrubs where the ticks breed.

A multi-centre clinical trial conducted by Indian researchers which involved 800 patients found that administering a combination of antibiotic drugs is more effective for treating severe scrub typhus than single-drug therapies. The study has been published in *New England Journal of Medicine*.

"The trial demonstrated that treatment with intravenous doxycycline and azithromycin is more effective than using either drug on its own. The combination of the two drugs may have resulted in a more complete blockade of protein synthesis and consequently reduced bacterial growth and multiplication," said Prof. George M. Varghese, Department of Infectious Diseases, Christian Medical College, Vellore, Tamil Nadu.

The patients were split in three groups through a randomisation process to receive intravenous doxycycline, intravenous azithromycin, or a combination of both intravenous doxycycline and azithromycin, respectively, for a week's duration.

The trial found that combination therapy was superior to therapy with intravenous doxycycline or azithromycin alone. Patients who were treated with combination antibiotics had fewer complications from the infection on the seventh day. In line with other studies, this study also found that there was no difference in the outcome between using doxycycline or azithromycin alone. Also, up to 96 (12%) of the 800 patients died.

Mr. Varghese said, "The implication of this study is that when using a combination of azithromycin and doxycycline to treat severe scrub typhus, more patients can be discharged from the hospital by the seventh day as they would have fewer persisting complications, such as respiratory distress syndrome (ARDS), hepatitis, hypotension or shock, meningoencephalitis, and kidney failure.

About 6% of patients infected with scrub typhus could die in spite of diagnosis and treatment. The new evidence is expected to change treatment guidelines which will lead to better salvaging of patients.

Mr. Varghese added, "Scrub typhus typically presents as a fever that may be associated with headaches, coughs, shortness of breath, and brain symptoms, like confusion and disorientation. One-third of patients develop severe disease that affects multiple organs in the body and leads to lethally low blood pressure. Death rates in severe disease can reach up to 70% without treatment and 24% with treatment."

Scrub typhus is a major public health threat in India and other South Asian countries. It is estimated that in endemic regions, about a billion people are at risk of contracting the infection, while a million people get infected and 1.5 lakh people die from it every year. The trial was funded by Department of Biotechnology and Wellcome India Trust.

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