

SCRUB TYPHUS IN INDIA

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ABSTRACT

Scrub typhus, also known as bush typhus, is a disease caused by bacteria called *Orientia tsutsugamushi*. It is important to be noticed that humans are accidental hosts, but when infected chiggers (larval mites) bites them, they can be affected. It is a public health problem causing severe anguish and mortality. The symptoms, usually begin within 10 days of being bitten, consists of high-grade fever, severe headache, apathy, Body aches and muscle pain, a dark, scab-like region at the site of the chigger bite (also known as eschar). Black spot (eschar) may be seen at the site of inoculation. Patients may develop aggravation like interstitial pneumonia, myocarditis, and meningoencephalitis. Diagnostic approaches for scrub typhus are based on several aspects. In laboratory blood sample is tested. It can be analyzed clinically based on sign & symptoms or can be diagnosed serologically. Molecular methods can be acclimated for their rapid identification as well as for epidemiological purposes. It is advised, drugs like doxycycline and tetracycline, which effectively treat scrub typhus, in most of the cases. People with severe illness may develop organ failure and bleeding, which can be fatal if left untreated. There is the unavailability of vaccines for Scrub typhus but many vaccines using Sta47 and Sta56 antigens are under trial as a recombinant vaccine. As the absolute impact of scrub typhus on the population and its geographical distribution remains unknown.

Keywords: *Eschar, Rickettsial Diseases, Scrub Typhus,*

I INTRODUCTION

Scrub typhus is an acute, febrile, infectious illness that is acquired by *Orientia* (formerly *Rickettsia*) *tsutsugamushi*. It is well accepted as *tsutsugamushi* disease. Scrub typhus was first described from Japan in 1899. Humans are accidental hosts in this zoonotic disease. The term scrub is acclimated because of the type of vegetation (terrain between wood and clearings) that harbours the vector. The infection is begin in large range of ecological altitude primary jungles, semi-desert, abundance desert, aerial meadows of Himalyas. Scrub typhus is accepted to be accustomed in bottom hills of Himalayas. JAMMU & KASHMIR, SIKKIM, MANIPUR, NAGALAND, MEGHALAYA, HIMACHAL PRADESH ETC. TAMILNADU, KERALA AND UTTAR PRADESH had been

also reported. However, currently samples are getting activated absolute from Delhi, Haryana, Rajasthan, Maharashtra, Uttarakhand and Chhattisgarh. Over the years, the numbers of samples and areas which detected Scrub typhus accept aswell increased. The National Centre for Disease Control at its Zoonosis Division zoonosis Division received 740 samples from doutable cases for scrub typhus.

II CLINICAL SYMPTOMS OF SCRUB TYPHUS

The chigger bite is painless and may become noticed as a brief localized itch. Bites are generally found on the groin, axillae, genitalia or neck. An eschar is generally apparent in bodies at the spot of the chigger bite. The misery begins rather al of a sudden with afraid chills, fever, headache, infection of the mucous membrane lining the eyes (the conjunctiva), and blister of the lymph nodes. A spotted rash on the block may be present. Eschars are attenuate in patients in countries of South-East Asia and aboriginal bodies of typhus-endemic areas frequently accept beneath astringent illness, generally after adventurous or eschar.

Although scrub typhus received abundant awareness before and during the Second World War and to a bottom amount during the Vietnam/American war, essential epidemiology is less under- stood with incomplete data on accident and accountability of diseases for patients, their families, societies and the economy. This unawareness is may be due to some factors; analytic presentation is related causes of fever, diagnostic difficulties accord to misdiagnosis and beneath recognition, and adapted analytic tests are not broadly available. Following the findings of chloramphenicol in the 1940s, the scientific interest dropped rapidly and scrub typhus has since received little global attention. The data quoted by the World Health Organization (WHO) stating that over a billion humans are at risk and million cases are estimated per year is referenced to a paper published 20 years ago in 1997

III RATIONALE FOR THIS STUDY

Scrub typhus is among the leading causes of undifferentiated treat- able fever in Asia. The mortality rates appear low at first glance, but considering the numbers of those exposed and/or infected a significant disease burden is expected globally. The follow- ing research questions were addressed: What is the estimated global burden of disease for scrub typhus? What data on seroprevalence and minimum incidence for scrub typhus are available by geographical regions? What is the mortality rate of treated scrub typhus?

DATA ON EPIDEMIOLOGY OF SCRUB TYPHUS FROM FEVER STUDIES (HOSPITAL BASED INCIDENCE)

First Author	Country, region	Year	Patients with scrub typhus n (%)	Total patients in study
Roopa	India, Pondicherry	2012–2015	225 (41.3%)	545
Borkakoty	India, Arunachal Pradesh	2013	31 (96.9%)	32



Kumar	India, Chandigarh	2011–2012	49 (24.4%)	201
Narvenkar	India, Goa	2009–2010	15 (34.1%)	44
Chrispal	India, Vellore	2007–2008	189 (47.5%)	398
Kamarasu	India, Tamil Nadu	2004–2005	204 (16.1%)	1,270
Sharma	India, Himachal Pradesh	2003–2004	52 (34.7%)	150
Vaz	India, Jammu	2002	12 (50.0%)	24
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IV DISCUSSION

Encephalitis is causing serious damage on our society. This is not due to lack of medical treatment, the reason behind all the damages is, illiteracy and unawareness. Till now days, etiology of encephalitis is unknown up to 40-50% of total cases. Some of recent researches show the presence of higher level of O.TSUSTSUGAMUSHI IgM and IgG among AES case patient.

Since scrub typhus is a bacteria oriented disease, the mode of transportation of the bacteria should be known for prevention and control. Some of researches states about it may be transmitted by trombiculid mite larvae which feed on forest and rural rodents, including rats, voles, and field mice but it is yet to be proved.

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