

Leptospirosis- An Indian Experience

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Introduction

Leptospirosis is a ubiquitous zoonosis caused by the spirochete *Leptospira interrogans* which has 23 serogroups and more than 200 serovars. It is globally being recorded as an epidemic threat in developing countries like India in and around the rainy season. The annual incidence of this disease is estimated at 10 to 100 per 100,000 in tropical regions and 0.1–1.0 per 100,000 in temperate areas [1]. The spectrum of disease ranges from subclinical infection to a severe syndrome of multiorgan dysfunction characterized by headache, fever, myalgia, jaundice, hepatomegaly and convulsions[2]. In humans, a disease resembling Leptospirosis was recognized as an occupational hazard of rice harvesting in ancient China. It was identified elsewhere more than one century ago as a disease causing severe icterus and renal failure in humans. Initially, it was named 'Weil's disease' after Adolf Weil who first reported it in 1886. Twenty years later, a spirochete in a patient with Weil's disease that died from "yellow fever" was isolated and named "*Spirocheta interrogans*" as the organism with its hook ends resembles a question mark. This same spirochete was later isolated independently in both Japan and Germany and named as "*Spirocheta icterohaemorrhagiae*". Two years later, this organism was shown to differ from other spirochetes and reclassified into a new genus called "*Leptospira*"[3].

Epidemiology in India

Leptospirosis was first reported from the Andaman Islands in 1929 and has since affected all parts of India[4]. Researchers isolated *L. andamans* and *L. Grippotyphosa*[5]. Predictably, most outbreaks have been reported from the coastal regions during the monsoon months. Recent significant outbreaks have been observed in Orissa, Mumbai [6-8] and the Andaman archipelago [9,10]. Karnataka and southern part of Gujarat revealed 130 deaths within a span of two months due to leptospirosis in 2011. More recently 209 cases with 12 deaths were reported from Kochi, Kerala. In October 2012, 16 deaths were reported from Surat and Valsad districts of Gujarat. The

Brihanmumbai municipal corporation (BMC) has reported 15 leptospirosis fatalities in Mumbai in just 10 days in July 2015.

Due to its protean clinical manifestations and difficulty in a concrete clinical diagnosis which leads to high spread and fatality rate in India, there is a dire need of implementation of national level programme to prevent its spread and management so that precious human life can be saved.

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