An Algorithmic Approach to Determine the Etiology of Acute Encephalitis Syndrome (AES) in India

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Introduction

Acute Encephalitis Syndrome (AES) poses a major public health problem in India affecting thousands of people every year during the post-monsoon season (July-November). Japanese encephalitis virus (JEV) accounts for 5-35% of the AES seen in India; however no systematic efforts have been made to determine the precise etiology of all AES cases.

Aims and Objectives

To establish a tiered network of laboratories for AES sample testing and to introduce an algorithmic approach within the network for determining the etiology of 1253 cases of AES that occurred in four major states of India in the year 2014.

Methods and Materials

TESTING LABS:

TESTING ALGORITHMS:

The algorithm adopted in the network enabled identification of etiological agents in 39.5% cases (495/1253). JEV was the commonest etiological agent identified in 21% of cases (260/1253). Other agents were detected in 19% of cases (235/1253)- Scrub typhus (14.13%), Dengue (2.3%) and West Nile virus (0.8%) were detected in serum samples while S. pneumoniae (0.7%), H. influenzae (0.3%), HSV (0.3%) andEnterovirus (0.08%) in CSF samples.

Conclusions

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