

## Letter to the Editor

### Response to Hossain and Others: Hospital-Based Surveillance for Japanese Encephalitis at Four Sites in Bangladesh, 2003–2005

Dear Sir:

In response to Hossain and others<sup>1</sup> paper on hospital based surveillance confirming the presence of Japanese Encephalitis (JE) in Bangladesh. We comment on the small proportion of confirmed cases of JE and the need to clarify sample timing of sample relative to onset of illness to confirm absence of JE virus in the enzyme-linked immunosorbent assay (ELISA) negative cases.

Hossain and others<sup>1</sup> paper on hospital-based surveillance for JE in Bangladesh provides important data on the spread of this devastating disease.<sup>1</sup> This paper is important, because it shows further evidence of JE in Bangladesh, previously only reported during an outbreak in 1977.<sup>2</sup>

They systematically assessed an impressive 2,609 patients over four study sites, with 492 meeting their criteria for screening for JE virus (JEV). Of the cases of acute encephalitis (AES), their results confirm that 4% had JEV. It is also important to consider the patients with negative ELISA results for JEV; 472 (96%) of the patients had an unknown cause of their AES. ELISA testing is the method of choice for JEV, because viraemia is too transient for molecular methods, such as polymerase chain reaction, to be useful. There are data that show that IgM responses to JEV take between 7 and 10 days to develop.<sup>3,4</sup> However, there are also data to suggest that an early low cerebrospinal fluid (CSF) immunoglobulin (Ig)M response may be suggestive of a poor outcome<sup>5</sup>; thus, if the CSF IgM rise is only transient, it may be missed by single sampling. Accurate diagnostics in the field are notoriously difficult, but it is crucial that this problem is highlighted and that timing of samples is clearly described so as not to engender complacency about the real prevalence and incidence of JE in cases of AES.

The current World Health Organization (WHO) JE surveillance standards recommend a sample at  $\geq 10$  day of illness to confirm or exclude JEV.<sup>6</sup> Patients with early JEV ELISA negative samples should, thus, not be classified as JE negative but instead, as having JEV unknown status. Although it can be difficult to get the timing of the illness onset, it is preferable, where possible, to distinguish between JEV negative

and JEV unknown, so that the JEV unknown cases can be excluded from any calculations of the proportion of cases caused by JEV. These data are helpful in informing government and funding bodies as to where to target JE vaccination programs.

PENNY LEWTHWAITE  
*Brain Infections Group*  
*University of Liverpool, Liverpool*  
*United Kingdom*  
*E-mail: pennylewthwaite@doctors.org.uk*

TOM SOLOMON  
*Brain Infectious Group and Division of Neurological Science*  
*University of Liverpool*  
*Walton Centre for Neurology and Neurosurgery*  
*Liverpool, United Kingdom*

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