ABSTRACT

This study was conducted to determine the proportion of Herpes simplex virus (HSV), *Haemophilus influenzae*, *Streptococcus pneumoniae* and *Neisseria meningitides* in patients clinically diagnosed with meningo-encephalitis in three selected hospitals in Colombo district. There are no published data in Sri Lanka on the prevalence or incidence of individual encephalitides and studies done using molecular diagnostic methods in this interest are scarce.

The study was carried out as a hospital based, cross sectional, descriptive study from January to April 2010. A total of 51 patients, who presented with fever and at least one of the signs of cerebral involvement were included in the study. Their socio-demographic and clinical data were analyzed and CSF samples were collected within seven days of onset of symptoms. These samples were subjected to a nested PCR to detect HSV and 16 samples with a bacterial count in the CSF full report were subjected to a multiplex bacterial PCR to detect *S. pneumoniae*, *H. influenzae* and *N. meningitides*.

The study population consisted of 30 children and 21 adults. Fever was present in 100% of patients. 10% of children and 10% of adult patients presented with signs of meningitis. Children presented earlier in the illness for hospital than adults which was statistically significant. CSF volumes collected from paediatric patients were significantly less than those from adults.

Nested PCR for HSV for 51 CSF samples did not show any positive results. Multiplex bacterial PCR for *S. pneumoniae*, *H. influenzae* and *N. meningitides* for the 16 CSF samples showed one sample positive for *H. influenzae* in a paediatric patient.

False negative results would have occurred due to low CSF volume, multiple freeze-thaw cycles for CSF and economical but less sensitive nucleic acid extraction methods.

Extensive studies representing the entire country to determine the aetiology and epidemiology of meningo-encephalitis in Sri Lanka are urgently needed.