ABSTRACT

Objectives

Japanese encephalitis is an acute viral infection caused by mosquito borne Japanese encephalitis virus. JE virus is a virus from flaviviride Domestic pigs and wild birds are reservoirs of the virus, the most important vectors of the disease are the culex mosquitos .Japanese encephalitis virus causes most serious clinical disease among the flavivirus group. Approximately 3 billion people live in endemic regions. It is the most common cause of arbo viral encephalitis Japanese encephalitis is diagnosed by detection of antibodies in serum by IgM capture ELISA

Methodology

This is prospective study that aims to analyze 100 cases of clinically diagnosed meningoencephalitis. Clinical data and CSF samples to be collected for cytological and chemical analysis in serological positive cases molecular characterization of JE virus to be done by polymerase chain reaction in serologicaly positive cases

Results

The study was conducted at Thanjavur Medical College Hospital. Thanjavur over a period of June 2015 to June 2016.The aim of the study is to determine the seroprevalence Japanese encephalitis virus in patients attending tertiary care hospital and molecular characterization for JEV. CSF samples were collected from 100 suspected meningoencephalitis patients. All these samples were initially tested for IgM antibodies by Elisa. Molecular detection method was done for the positive samples by real time PCR assay. CSF samples were stored at -

20 c until tested for molecular detection. Real time PCR was done for 6 sample, including both positive and negative for IgM ELISA for JEV. Out of 6 samples, 1 sample was positive by igm ELISA. One sample was positive for JEV by Real-time PCR assay and this one positive sample was further processed for JEV genotyping. .

- Prevalence of JEV 1%.
- High prevalence was seen among children in the age group 5-10 years.
- Real –time PCR for JEV was positive for one sample (100%) out of 1 positive sample by Elisa.

Conclusion

This study estimates the seroprevalence of Japanese encephalitis in a tertiary care hospital. The seroprevalence of Japanese encephalitis was 1% .The prevalence was high among children when compare to adults for JEV. This study estimates the magnitude and dynamics of disease transmission .Real –time PCR is the gold standard method, because it estimates the viral load and genotyping, because both viral load and genotyping plays an important role in treatment strategy. Moreover knowing about the genotypes in the community helps in the development of future vaccine. Further studies of genotype distribution will helps in the development, adaptation and prevention strategies. Early diagnosis prevents the disease progression and further complications.