

Poster presentation

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## Neurological complications in Chikungunya infection

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### Background

In May 2006, there was a big Chikungunya virus (CHIKV) outbreak in the Nagpur district of Maharashtra state in India. Most often CHIKV is a self-limiting febrile illness. However, neurological complications such as meningoencephalitis have been reported in a small proportion of patients during the first Indian outbreak as well as the recent French Reunion islands outbreaks. The purpose of this study was to see the various neurological complications with CHIKV infection. In addition, we have evaluated our in house ELISA system For CHIKV antigen in CSF/Serum samples of these patients. The developed method was compared with IgG and Ig M and RT-PCR assays.

### Methods

All patients who had clinical features of CHIKV infection with neurological complications were included. On basis of clinical features and investigation findings the patients were grouped as Encephalitis, Myelopathy, P N, Myeloneuropathy and Myopathy. Forty-nine serum and thirty CSF samples eight samples were collected from CHIKV patients with neurological complications.

### Results

Total number of CHIKV infection cases seen during the period of June 2006 to December 2006 was 300. 49 out of 300 patients enrolled for the study had neurological complications. Among them, 42 were males and 7 were females. These patients were grouped under encephalitis, n = 27, myelopathy n = 7, neuropathy n = 7, myeloneuropathy n = 7 and myopathy n = 1. Our developed ELISA

method for antigen detection shows sensitivity of 80% as compared to IgG (32%) and IgM (11%) and RTPCR assay (70%).

### Conclusion

Recent CHIKV infection was associated with neurological complications. Our house-developed ELISA system based on CHIKV antigen detection is more sensitive than IgG and IgM and equivalent to RTPCR assay.