

Molecular Epidemiology of Viral Meningitis in Children Referred to Taleghani Hospital, Gorgan

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Background & Objectives: Viruses are the most common cause of meningitis and Enterovirus, VZV, HSV-1, HSV-2 and Mumps viruses are the most prevalent viral meningitis. Early detection, treatment and management of viral meningitis are priority. We aimed to evaluate distribution of above viral meningitis in children referred to Taleghani hospital in Gorgan, South east of Caspian Sea, Iran.

Methods: In this descriptive study CSF and blood samples were taken from 40 children who were referred with meningitis symptoms since Jun 2008 till Sep 2010. 40 samples with negative bacterial culture were used for viral, biochemical and cytological assays. Extraction of viral nucleic acid from CSF was done by High pure viral nucleic acid kit. PCR, RT-PCR and Real-time PCR was performed for detection of viruses. Demographic, clinical, biochemical and cytological data were collected and entered in SPSS version 16. Statistical analysis performed and all cases with $p < 0.05$ was considered significant.

Results: We have detected 12 (30%) viruses by distribution of 5 (41/7%) Enterovirus, 4 (33/3%) HSV-1 and 3 (25%) Mumps viruses. Patients were aged between 1 month to 10 years old with mean 3 years. 92/5% of them were living in rural area. All positive cases showed fever and CSF Pleositosis with no bacterial growth and gram staining and urinary tract infection. No Specific clinical symptoms for meningitis observed.

Conclusion: In conclusion, our results showed clinical and biochemical analyses are not sufficient for certain diagnosis of meningitis in children and molecular assay is recommended for early detection, treatment and management of viral meningitis.

Keywords: Viral Meningitis; CSF; Gorgan