

TITLE: MOLECULAR IDENTIFICATION BY PCR OF VARICELA ZOSTER VIRUS (VVZ) IN CASES OF MENINGOENCEPHALITIS.

AUTHORS: SILVA, B.C.; COELHO, B.M.R.; CARDOSO, B.T.M.; COSTA, I.B.; LIMA, A.A.P.; COSTA, I.B.; VIEIRA, M.A.C.S.; RAMOS, F.L.P.; MONTEIRO, T.A.F.; SOUSA, R.C.M.

INSTITUTION: INSTITUTO EVANDRO CHAGAS, ANANINDEUA, PA (BR-316 KM 7 S/N – LEVILÂNDIA, CEP 67030-000, ANANINDEUA - PA, BRAZIL)

ABSTRACT:

The Varicela Zoster Virus (VVZ) is a herpesvirus member of the subfamily Alphaherpesvirinae, Varicellovirus genus. Among humans, the virus is transmitted mainly through droplets of saliva and vesicles secretion that might be led by fomites. The VVZ can cause varicella (chickenpox) during primary infection, which can later lead to a latent infection. In several situations, when there is a lack of specific cell immunity against the VVZ, a reactivation of viral replication can occur, with probable clinic manifestation through the herpes zoster. Among the complications of varicella there is the complication that occur in the central nervous system such as the meningoencephalitis. The incidence of meningoencephalitis by varicella is 1 to 2 cases per 10.000 with greater incidence in adults and babies. The clinical status develops critically and can be lethal in 2% of the cases raising the need for an urgent therapeutical decision. This study aimed to determine the frequency of varicella zoster virus in cases of meningoencephalitis. This is a transversal type study from 2016 to 2018 in which cerebrospinal fluid (CSF) samples of 218 patients with meningoencephalitis were analyzed. Samples of CSF suspected to be infected with varicella zoster virus were analyzed for molecular identification by means of the Polymerase Chain Reaction (PCR) technique using primers from the VM20 and VP22. This study was approved by the ethical committee of the IEC, protocol number 2.992.456. A total of 280 samples were tested to VVZ, 1,3% (3/218) were detectable by PCR. Among the 3 cases, 2 (66,6%) were kids from 0 to 10 years old 50% men and 1 (33,4%) were women from 10 to 19 years old. The most frequent symptoms were: muscle weakness, ataxia, body imbalance, decreased speech, paresthesia, cough or chest pain. In all cases, patients experienced muscle weakness. The results were similar to other studies and the severity in the symptoms shows the importance of a quick diagnosis due to the critical clinical status that may lead to death.

Keywords: Varicela Zoster, Meningoencephalitis, Polymerase Chain Reaction.

Development Agency: Postgraduation in Virology - Evandro Chagas Institute - Secretariat of Health Surveillance / Ministry of Health