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Viral associations in acute demyelinating diseases of Nervous system: Epstein-Barr Virus and measles more capable

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Abstract

Acute demyelinating diseases involves inflammation/selective destruction of myelin in the nervous system triggered by pathogenic viruses/bacteria usually in post-infectious/para-infectiousperiod and may induceauto-antibodies to myelin. Owing to its rarity, studies are limited with individual virus hence this is the first report from India testing for six viruses.

Ninety two cases (predominantly males) of acute demyelinating diseases (2007-2012) attending this tertiary care institute were tested for recent viral infection by determiningvirus specific IgM antibodies by ELISA. Of 92 cases 43 had Guillain-Barré syndrome (*GBS*)(≤30 yrs;) with upper respiratory tract infection,diarrhea and lower limb paresis. Twenty two hadacute transverse myelitis (*ATM* , 10-20 yrs and 41-50 yrs) presented with fever, progressive proximal leg weakness,bladder dysfunction and inflammatory signs in spinal MRI. In27 acute disseminated encephalomyelitis (ADEM, ≤30 yrs)most had fever, malaise, headache, vomiting with focal or multifocal neurological deficit. In GBS herpes simplex (HSV1+2), cytomegalovirus (CMV),Epstein-Bar virus(EBV), varicella zoster (VZV), measles and parvovirus B19 (B19) infection (n=13; 30%) were found in 2,3,6,0,2,0 cases respectively. In ATM 3 had measles and 2 had CMV and in ADEM 3 had measles, 2 had HSV1+2 and one each had CMV and EBV.

Overall 25(27.2%) cases had measles(n=8), EBV(n=7) and CMV(n=8) but none had VZV or B19 infection. EBV causes polyclonal activation while measles virus is neurotropic hence the two can cause demylination (n=15) in CNS more often.Recovery was complete in 3-4wks with intravenous corticosteroid/supportive treatment but four persisted with lower limb weakness and one patient died (ATM).

Biography

Professor Janak Kishore is Chief of Serology and Molecular Virology in the department of Microbiology, Sanjay Gandhi Post-graduate Institute of Medical Sciences, India. He was Associate Editor Indian Journal of Virology, member national academy medical sciences,American societies and Fellow of JICA, Japan. Dr Kishore taught for over 30 yrs with pioneer work on parvovirus B19, developed in-house PCR and ELISA, published three novel clinical associations of B19. He also worked on cytomegalovirus, enteroviralhemorrhagic conjunctivitis, rubella etc. Dr Kishore published over 50 papers, was reviewer for reputed journals, organized conferences, Chaired sessions and frequently invited to speak in international conferences.