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Case Report

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A CASE REPORT ON ACUTE DISSEMINATED ENCEPHALOMYELITIS

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INTRODUCTION

Acute disseminated encephalomyelitis (ADEM) is an autoimmune inflammatory disorder of the central nervous system. Etiopathogenesis is thought to be immune mediated. Currently for ADEM, magnetic resonance imaging(MRI) is the imaging modality of choice to demonstrate lessions in white matter of brain.There are no specific biomarkers available currently to diagnose ADEM;hence, diagnose is made after excluding clinical and laboratory findings and suggestive neuroradiological features of other disease.

It predominately affects children in the age group between of 5 to 8 years. Is most widely thought to be a post viral, post vaccination autoimmune phenomenon. Acute disseminated encephalomyelitis is a monophasic inflammatory demyelinating disorder of the white matter that is often preceded by viral infection or recent vaccination. This autoimmune phenomenon occurs in genetically susceptible individuals resulting in a rapid inflammatory response causing vascular congestion and increased permeability of central nervous system vasculature following exposure to a foreign antigen. Focal neurological deficits and encephalopathy are generally manifest 1 to 3 weeks after the primary illness with neurologic decline progressing rapidly over days to weeks.

A plethora of viral and bacterial pathogens and number of vaccination have been associated with ADEM experimental animal study indicate that both primary and secondary autoimmune responses contribute to central nervous system inflammation and subsequent demyelination. The clinical diagnoses of ADEM is strongly suggested by a close temperal relationship between an infectious incident or an immunisation and the onset of leukoencephalopathic neurological symptoms. The major differential diagnosis of ADEM is multiple sclerosis. Treatment option of ADEM consist of anti-inflammatory and immunosuppressive agents.

CASE HISTORY

A 5 year old male patient, presented to paediatrics department with complaints of cough, fever, vomiting, Headache, Difficulty walking and sitting. The ESR and Platelet levels are elevated. MRI Brain reveals few tiny foci of T2W1 FLAIR hyperintensities, within spinalcord. MR Imaging reveals no significant abnormality in the iv discs, vertebrae, spinal cord, conus medullaris and thecal sac. Peripheral smear shows mild leucopenia with relative neutrophilia. TC,DC of CSF fluid shows TC-35 cells, DC- (P:6%,L:94%).Initially symptom started with fever and cough for 4 days followed by difficulty in walking and sitting and severe headache, vomiting and tiredness were also reported. On examination the child was sick and febrile by considering the physical and clinical examination the diagnosis was done.

Acute disseminated encephalomyelitis (ADEM) is an autoimmune inflammatory disorder of the central nervous system. The parents was counselled to avoid dust and chemical irritants and also to took proper care of the child. For the treatment of disease IV antibiotics and other supportive measures given. On discharge syp

Omnacortil 5ml, Syp Rantac 3ml, Syp Zincovit 5ml and physiotherapy also recommended.

DISCUSSION

Acute disseminated encephalomyelitis (ADEM) is an autoimmune inflammatory disorder of the central nervous system. Etiopathogenesis is thought to be immune mediated. Currently for ADEM, magnetic resonance imaging (MRI) is the imaging modality of choice to demonstrate lessions in white matter of brain. There are no specific biomarkers available currently to diagnose ADEM; hence, diagnose is made after excluding clinical and laboratory findings and suggestive neuroradiological features of other disease.

The diagnosis is based on patient history, laboratory investigations and clinical examinations. The ESR and Platelet levels are elevated.MRI Brain reveals few tiny foci of T2W1 FLAIR hyperintensities, within spinalcord. MR Imaging reveals no significant abnormality in the iv discs, vertebrae, spinal cord, conus medullaris and thecal sac. Peripheral smear shows mild leucopenia with relative neutrophilia. TC,DC of CSF fluid shows TC-35 cells, DC- (P:6%, L:94%).Initially symptom started with fever and cough for 4 days followed by difficulty in walking and sitting and severe headache, vomiting and tiredness were also reported. On examination the child was sick and febrile by considering the physical and clinical examination the diagnosis was done.

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