Acute disseminated encephalomyelitis /atypical presentation case report

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Abstract— Acute disseminated encephalomyelitis (ADEM) is a rare disease of central nervous system with different presentation. It is difficult to diagnose it clinically and relies on neuro imagining, here we present a case of ADEM which presented by atypical presentation and discovered by MRI brain as case of ADEM. Early diagnosis and treatment is the determinant of favorable outcome.

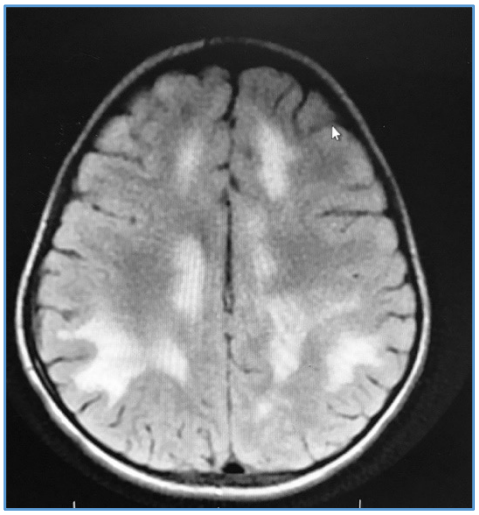
Index Terms—Acute disseminated encephalomyelitis, Ataxia, ADEM, atypical presentation, CNS, Infection

Introduction:

Acute disseminated encephalomyelitis (ADEM) is an autoimmune inflammatory process of central nervous system, mechanism of disease is thought to be immune mediated. Most of cases follow an antecedent infection or immunization.[1] ADEM commonly manifested by decreased level of consciousness ,headache, weakness, blurred vision, seizure, the symptoms and signs are non specific with no guidelines to direct this assessment. Therefore clinical and neuro-imaging judgement Seems so important and it should be considered in patients who present with any neurological deficit[2]

Case report:

4 years old Saudi girl medically free before presented with history of unsteady walking for 3 days. This problem was preceded by URTI two weeks back, no decrease level of consciousness, no seizure, no headache, no vomiting, no diarrhea, no skin rash, no weakness, no tremor. On examination: fully conscious, oriented, no sign of neurological deficit, no sign of meningeal irritation, normal tone, power and reflexes. She has unsteady gait while walking, other examination unremarkable.Diagnosis and management: CBC, serum electrolyte, liver panel, renal panel, RBS all normal, CRP negative, ESR 45 , CT brain done which was normal. So urgent brain MRI done show wide spread area of white matter hyperintese signal area also with gray matter involvement which was diagnosed as ADEM by neuroradiologist consultant in our hospital and started immunoglobulin for two doses as advised by pediatric neurology consultant. After two days clinical condition improved no more ataxia. Seen also by ophthalmology and discovered to have bilateral papilledema.



Discussion:

Acute disseminated encephalomyelitis is an autoimmune inflammatory problem of central nervous system, most of cases follow an antecedent infection or immunization. ADEM typically begins within 6 days to 6 weeks following either infection or vaccination. ADEM characterized by different presentation commonly by decrease level of consciousness, seizure, neurological deficit, blurred vision, aphasia. Currently MRI become modality of choice for diagnosis which is characterized by multifocal lesion in the white matter, basal ganglia, thalamus and very rare cerebellum. Treatment of ADEM include symptomatic and immunomodulator therapy like intravenous methyl prednisolone and intravenous immunoglobulin and and plasmapheresis as various modality of treatment. The outcome of ADEM is general good with 60-89% of children making full recovery. It is very important to exclude other similar condition like meningoencephalitis and multiple sclerosis especially if presented by optic neuritis.
[3[ ]4][5 [ ]6]

Conclusion:

In conclusion ADEM commonly complicate vaccination and infection, this disease can present without common symptoms like decrease level of consciousness or seizure or weakness like in our patient which was only presented by ataxia and bilateral papilledema which is uncommon in ADEM. We recommended early MRI if any suspicious for better management and good outcome.
Conflict of interest: non declared.

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