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Cases Of Encephalitis Associated With Chikungunya Virus Infection

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Abstract
Chikungunya is a viral disease transmitted to humans by infected mosquitoes causes severe joint pain and fever,may also cause muscle pain,headache,nausea,fatigue and rash.Recent chikungunya virus infection was associated with various neurological complications,suggesting neutropic nature of the virus.The neurological complication included-encephalitis, myopathy, peripheral neuropathy, myeloneuropathy and myopathy.
Here we report case series of patients presented to our tertiary care hospital with H/O fever,joint pain and altered sensorium and later diagnosed to be positive for chikungunya virus.
Neurological complications of chikungunya virus infection are infrequent and have been reported recently.
There has been a recent reports of neurological complications as a major cause of morbidity and mortality in chikungunya virus infection.

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I. Introduction

Chikungunya fever is an acute febrile illness caused by an arthropod borne alphavirus,chikungunyavirus.The typical presentation of chikungunya fever includes abrupt onset of fever,arthralgia and occasionally maculopapularrash.Polyarticular artheritis and tenosynovitis and can cause severe joint pain lasting months to years.Rare instances of hepatitis,myocarditis,hemorrhagic manifestations and meningitis or encephalitis.Neurologic syndromes like meningitis and gullianbarre syndrome.Neuro-ophthalmologic finding include retrobulbarneuritis.Cardiac complications include myocarditis and pericarditis.

However it is suggested that at least some of the patients with encephalopathy had chikungunyaencephalitis.Thesigns,symptoms and laboratory characteristics of chikungunyaencephalopathy,make it difficult to interpret relationship between specific clinical features,laboratory evidence of encephalitis or evidence of cerebral inflammation on neuroimaging.

II. Case-Report

PATIENT-I

In September 2024, a 65 yrs old male patient presented with c/o high grade fever,jointpain,breathlessness and abnormal body movements since 3 days.On arrival patient was drowsy,in altered sensorium,normotensive.On examination patient was found to be tachypnoic with B/L Pedal odema.Initial laboratory investigations revealed metabolic acidosis with dyselectrolytemia.Dengue serology and rapid typhi dot sent was negative.Chikungunya RNA-PCR was detected.Neurology consultation was done and MRI brain done showed hyperintense signal involving both temporal lobes.Csf analysis done showed lymphocytosis.Patient was on ventilator and inotropic support.Provisional diagnosis of chikungunya encephalitis with dyselectrolytemia was made.

CASE –II

66 yrs old male patient presented with c/o high grade fever,bodyache,jointpain,rashes all over the body and generalized weakness since 8 days. Haemogram showed leukocytosis with raised ESR and CRP level.RapidTyphi,Malaria Antigen and Dengue serology sent was negative.Patient was noticed to have abnormal behavior with irrelevant talking.MRI brain showed age related atrophy with chronic ischemic changes.2D Echo done showed LVEF-55%.Chikungunya RNA-PCR was detected.Patient was managed conservatively and was discharged in stable condition.

CASE –III

85 yrs old male patient presented in altered sensorium with H/O fever,joint pain and generalized weakness since 4-5 days. On arrival patient was found to have normal blood pressure,pulse and oxygen saturation.No Neurological deficit was observed.MRI brain done showed age related atrophic changes malaria

antigen and Rapid typhi sent was negative.Chikungunya RNA-PCR sent was positive.Patient was managed conservatively and was discharged in stable condition.

III. Result

In the above mentioned case series,all the three patients presented to our tertiary care hospital were males,above 60 yrs of age and with H/O high grade fever with altered sensorium.On evaluation no neurological deficit was seen.Chikungunya RNA-PCR was detected.Patient was diagnosed to have chikungunya encephalitis in v/o clinical picture and status of patient.These patient presented with impaired level of consciousness.EEG done in all patients did not revealed any specific information except generalized intermittent slow wave dysrhythmia.In outcome out of 3 patients one patient expired and other two were discharged in stable condition.

IV. Discussion

Most often chikungunya virus infection is a self limiting illness.Neurological complications are infrequent. It remains uncertain whether neurological symptoms are due to persistence of the virus or inappropriate immune response. Most patients recover fully but in some cases joint pain may persist for several months or even years .Occasional cases of eye, neurological and heart complication have been reported as well as gastrointestinal complications. Serious complications are not common but in older people the disease can contribute to other complications. Often symptoms in infected individuals are mild and the infection may go unrecognized.