

Post Varicella Zoster Acute Transverse Myelitis

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Sir,

Neurologic complications occur in approximately 2 per 10,000 cases of Varicella.¹ Common CNS complications of chicken pox are cerebellar ataxia and encephalitis, and rare complications are transverse myelitis, aseptic meningitis, Guillain-Barre syndrome, meningoencephalitis, ventriculitis, optic neuritis, post-hepatic neuralgia, herpes zoster ophthalmicus, delayed contralateral hemiparesis, peripheral motor neuropathy, cerebral angitis, Reye syndrome and facial paralysis. Here we present a case of ATM, following varicella infection in an adult patient.

Mrs. M, 45 year old female, developed fever followed by vesicular rashes over the body. The rashes were present in different stages of development. A clinical diagnosis of varicella was made. The patient did not receive any specific anti-viral treatment and the lesions healed on their own with scab formation and fever subsided. Five days following this, she developed acute onset urinary retention and was catheterized for the same. Later she developed constipation & numbness of both lower limbs with inability to move them. Over next 24 hours the numbness progressed to the level of upper chest. There was no weakness in upper limbs and no difficulty in breathing. Weakness and numbness didn't progress any further.

On Examination Vitals were stable. Healed rashes with scabs were present on trunk, arms and legs. On neurological examination, hypotonia was present in bilateral lower limbs. Power was 0/5 in lower limbs at ankle, knee and hip joints. Knee jerk and ankle jerk were absent bilaterally. Abdominal reflex was absent and bilateral plantar were

mute. Bilateral upper limbs were normal on examination. Touch, temperature, vibration and proprioception were absent below third dorsal spinal level. Examination of other systems was normal. A clinical diagnosis of post varicella acute transverse myelitis was made.

On investigating her hemogram, KFTs, LFTs, urine (R&M), Chest X ray PAV, ECG were all within normal limits. HIV serology was negative. In CSF: leukocyte count - were 5 cells/mm³; 80% lymphocytes, 20% polymorphs, protein- 231 mg/dl, sugar- 47mg/dl, ADA - negative (ADA =2 IU/l; normal <5). MRI dorsal spine with lumbosacral screening showed spinal cord from D5 to D7 vertebral levels appears bulky in size and hyperintense T2/STIR image. On T1WI it appears iso-intense to remaining spinal cord suggestive of acute transverse myelitis. Serum VZV IgM ELISA - positive 1:256 (cut-off: <1:32 negative; 1:32-1:64 equivocal; 1:128 or higher positive).

The patient was treated with IV methylprednisolone 1 g daily for 5 days, following which oral prednisolone 1 mg/kg for a total of 2 weeks was given, with taper over next 4 weeks. However, the weakness did not improve after 1 week of therapy. So, patient was discharged with urinary catheter in situ, with instructions regarding regular physiotherapy and catheter care. In follow up, patient partially regained sensation to touch and temperature 1 month after the acute episode. Following this, she had gradual improvement in lower limb power such that at 3 months she was able to sit in a wheel chair with support. Power at that time was 3/5 in lower limbs.

The frequency of transverse myelitis during or after Varicella infection is 0.3%.² The pathogenic bases for neurological complications has been postulated as either direct viral invasion or through an immune-mediated allergic mechanism. The interval between chicken pox and ATM is variable. According to a report, it can occur with the rash or may be delayed for up to 2 weeks.¹

No diagnostic test is completely accurate, since VZV cannot usually be isolated from blood or cerebrospinal fluid (CSF) in VZV myelitis and thus the diagnosis remains essentially clinical.

There are no established treatment regimens for transverse myelitis following VZV infection. Treatment of ATM is with corticosteroids, and methylprednisolone intravenous has been found to be effective in one study. The use of acyclovir in the literature is not clear, however, in some case reports they have administered 10 mg/kg/dose every 8 hourly for 10 days and revealed it as useful medicine when used in combination with methylprednisolone.¹ Early diagnosis and early start of therapy is useful in preventing prolonged neurological sequelae

References

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