Tozinameran

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Acute transverse myelitis: 2 case reports

In a report, an 81-year-old man and a 23-year-woman were described, who developed acute transverse myelitis following administration of tozinameran for COVID-19 prophylaxis [*routes and dosages not sated*].

Case 1: An 81-year-old man, received first dose of tozinameran [BNT162b2 vaccine; Pfizer] vaccine on 29 April 2021 and second dose of vaccine on 19 May 2021. He developed numbness in his fingers and bilateral hand weakness three days after receiving second dose of vaccine. The symptoms were worsened over the next 2 weeks. His medical history included diabetes mellitus and hypertension. He had no history of sensory symptoms. At the current presentation to the hospital, neurologic examination revealed deep tendon reflexes were exaggerated in the upper limbs, medical research council grade 2 weakness with paraesthesia detected in both hands and fingers. Spine MRI demonstrated high signal intensity and multifocal nodular enhancement with an ill-defined signal increase on T2-weighted images from the C1 to C3 vertebrae. Mild brain atrophy was observed on brain MRI. Cerebrospinal fluid examination was performed, which showed protein level, 28.6 mg/dL and normal white blood cell count. No evidence of malignancy was noted on abdomen and chest CT scan. Laboratory tests did show any abnormalities. Clinically relevant antibodies, such as anti-myelin-oligodendrocyte antibody, paraneoplastic antibodies, vasculitis antibodies and anti-aquaporin 4 antibody were not detected. The investigation findings were consistent with acute transverse myelitis secondary to tozinameran. The man was treated with methylprednisolone, which was tapered for 2 weeks using prednisolone. Subsequently, improvement in hand weakness was observed; however, one month later he continues to experience a limitation of his finger movements.

Case 2: A 23-year-old woman, who had no relevant medical history, received tozinameran [BNT162b2 vaccine; Pfizer] vaccine on 18 August 2021. Three weeks following first dose of vaccine, she suddenly developed tingling sensation in both thighs. After 1 hour, she experienced weakness of both legs, which was rapidly progressed. One day after the onset, she visited the emergency department, at that time she experienced urinary retention and she was unable to walk. Eventually, she underwent neurologic examination, which revealed severe weakness (MRC grade 2) in both legs. At that time, she did not experience tingling sensation, and sensory examination of both legs was normal. Additionally, it was noted that in both legs deep tendon reflexes were absent. During first two days after the hospitalisation, her legs weakness was worsened to MRC grade 1. A lesion with high signal intensity at the anterior portion of the conus medullaris on T2-weighted images were observed on spine MRI without contrast. Prolongation of central conduction time of somatosensory evoked potentials in the lower limbs and absence of cortical motor evoked potential were noted. Central conduction time was normal for the somatosensory evoked potentials and motor evoked potential of the upper limbs. Brain MRI revealed no abnormal lesions CSF examination was performed, which revealed normal WBC count (2 cells/µL) and protein levels (33.5 mg/dL). No evidence of aortic dissection was observed aortic CT scan. Tests for anti-neutrophil cytoplasmic antibodies, anti-aquaporin 4 and anti-myelinoligodendrocyte was negative. The woman was treated with methylprednisolone, and tapered for 2 months using prednisolone. Legs weakness was improved to MRC 4, after three months. It was noted that she was able to walk with unilateral assistance.

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