Tozinameran

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Pure sensitive chronic inflammatory axonal polyneuropathy: case report

An 82-year-old woman developed pure sensitive chronic inflammatory axonal polyneuropathy (CIAP) following COVID vaccination with tozinameran.

The woman with no significant medical comorbidities presented with lower limb sensory loss, pricking and marked gait imbalance after her second dose of tozinameran [BNT162b2; Pfizer-BioNTech COVID-19 vaccine; *dose and route not stated*]. Six weeks prior to presentation, she received her second dose of tozinameran and for first 3 days, she had fever and body pain. On day 4, her fever subsided and symptoms deteriorated with slow and progressive gait difficulties till bedridden. On admission, her neurology and cranial nerve examination reports were normal. She required assistance in standing and romberg test and gait were impossible to perform. Muscle tone, mass and strength were reported normal in both the extremities. No deep tendon reflexes were seen. On finger-to-nose and heel-knee-shin tests, limb ataxia was reported. She had reduced sensation to light, touch, vibration and proprioception. CSF had albumin-cytological dissociation and presence of GM_3 antibodies. Reports of motor nerves conduction study was normal and showed bilateral absence of median, ulnar and sural nerves sensory compound nerve action potential. Somatosensory evoked potentials were also unremarkable. Her spine MRI revealed roots enhancement from C3 to Th2 and diffuse enhancement of cauda equina nerve roots.

The woman was treated with methylprednisolone and no complications were reported. Significant improvement was seen after 5 days of treatment, and she was able to walk with mono-lateral support. Romberg maneuver was still positive. Physical therapy was given in the recovery period. Upon discharge, she was referred to an acute rehabilitation clinic. In 4 month follow-up visit, she reported improvement in gait and continuing ataxia. The nerve velocity conduction study reports of median and ulnar nerve were normal and compound nerve action potential showed low amplitude. Based on these findings and clinical presentation a diagnosis of pure sensitive CIAP was made.

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