Tabes dorsalis showing abnormal somatosensory evoked potential with normal spine mri finding

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Background: Tabes dorsalis is a late manifestation of untreated syphilis that is characterized by sensory ataxia, lancinating pains, and urinary incontinence. Pathologically, there is degeneration of the posterior roots and column of the spinal cord.Case report: A 43-year-old man presented with progressive difficulty in walking and tingling paresthesia in the lower limbs for 5 months. On examination he showed hypesthesia on below T12 level, sensory ataxia, generalized hyporeflexic deep tendon reflex and Argyl Robertson pupil.Serum FTA-ABS was positive and serum RPR was reactive (1:64). Both CSF FTA-ABS and CSF VDRL were positive. CSF examination also manifested WBC count 90/mm³ (lymphocyte 93%), protein 72mg/dl, glucose 53mg/dl. HIV ELISA was negative and serum vitamin B12 level was within normal limit. Genetic study for spinocerebellar atrophy was negative and nerve conduction study was also negative.Magnetic resonance imaging (MRI) of the whole spine showed no definite intramedullary abnormal findings. MRI of the brain also showed normal result. Median somatosensory evoked potential (SEP) was normal, but posterior tibial SEP revealed increased lumbar to cortical central conduction time, suggesting a spinal defect mainly below the cervical region. He was treated with aqueous crystalline penicillin G, 3 million units intravenously every 4 hours for 14 days, which relieved his ataxic gait. Follow up posterior tibial SEP after 6 months documented shortening of lumbar to cortical central conduction time.Conclusion: This is the first case report of tabes dorsalis with normal spine MRI finding but abnormal SEP result, correlating with patient's symptom.