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Spinocerebellar Ataxia type 3 responsive to nerve growth factor (Nobex)

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Abstract

Spinocerebellar ataxia type 3 (SCA3) is the most common type of SCA with few effective therapeutic measures. We report a case of a SCA3 patient responsive to nerve growth factor (NGF).

A 46-year-old female patient genetically confirmed SCA3 and family history came to our clinic. On neurological examination, she had horizontal nystagmus, decreased muscle tone, increased tendon reflex, normal muscle power, and no pyramidal sign in the four limbs. The vibration sense was decreased in both feet, and dysdiadochokinesia was found in both hands. Electrophysiological tests revealed that the somatosensory evoked potential (SSEP) was unremakrable in the bilateral upper limbs but absent in bilateral lower limbs, the remainders of the tests were normal.

After written informed consent was obtained, we solely administered NGF (Nobex) to this patient by intramuscular injection at a dose of 18 μg/d for 28 days consecutively. One of our movement disorder specialists performed Scale for the Assessment and Rating of Ataxia (SARA) and took the videos before and after therapy. Another movement disorder specialist independently blindly evaluated the above videos with SARA. The baseline average SARA score was 13 and decreased to 6 after 28 days of therapy. This patient was discharged home and followed-up for half a year. At 3 months and 6 months after therapy, the SARA score was 5 and 4 respectively. The follow-up SSEP performed at 6 months after therapy also showed improvement, and the latency phase of P40 was 40.50 ms in the left side and 37.83 ms in the right side.

Biography

Prof. Yuming Xu has completed his PhD at the age of 42 years from Huazhong University of Science and Technology. He is the director of Department of Neurology, director of the Department of Teaching and Research, the First Affiliated Hospital of Zhengzhou University. He has published more than 50 papers in SCI and/or SCIE journals and serving as an editorial board member of s series of repute journals like Life Science Journal, Chinese Medical Journal, Chinese Journal of Neurology, Chinese Journal of Stroke.

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