ORIGINAL RESEARCH PAPER

General Medicine

A CASE OF MORVANS SYNDROME ASSOCIATED WITH HEAVY METAL POISONING AFTER SIDDHA DRUG INTAKE

KEY WORDS: Morvans syndrome, heavy metal poisoning, siddha drug intake

Dr. Srinivasa Guptha L.R* Postgraduate, Dept. of General medicine, Saveetha Medical college and Hospital, Chennai. *Corresponding Author

Dr. Nidin Mohan Senior resident, Dept. of General medicine, Saveetha Medical college and Hospital, Chennai.

Dr. Dayanandan Y Assistant Professor, Dept. of General medicine, Saveetha Medical college and Hospital, Chennai

Dr. Rajalakshmi K.V Professor, Dept. of General medicine, Saveetha Medical college and Hospital, Chennai.

Dr. Sathish Kumar M Assistant Professor, Dept. of Neurology, Saveetha Medical college and Hospital, Chennai.

ABSTRACT

Morvan syndrome (MoS) or Morvan's fibrillary chorea (MFC) is an autoimmune-mediated syndrome that is frequently associated with autoantibodies targeting contactin-associated protein-like 2 (CASPR2-Abs). It is often associated with peripheral nerve hyperexcitability, autonomic instability and neuropathic pain. Here we report a case who presented with Morvans syndrome after 4 months siddha drug intake. This case highlights the association of Morvans syndrome with heavy metal poisoning and its incidental occurrence after siddha drug intake.

INTRODUCTION

Augustin Marie Morvan, a French physician, in 1890 first described Morvan's syndrome in patients with irregular myokymia and hallucinations as well as insomnia (1, 2). Morvan's syndrome is an autoimmune disorder and VGKC antibodies are believed to play a key pathogenic role in peripheral as well as the CNS manifestation (3). Past studies have reported the association of herbal medicines with heavy metal toxicity (4). It is characterised by severe lower limb painful dysesthesia, myokymia, and fasciculations involving lower limbs or whole body, autonomic dysfunction, and encephalopathy (5). Heavy metals poisoning from siddha medicine have been associated with Morvan's syndrome (6). There are only very few case reports published from our continent. Here we report a rare case of Morvans syndrome who presented 4 months after siddha drug intake.

CASE DESCRIPTION

A 36years old male presented to general medicine department with complaints of post viral arthralgia with generalized body pain, joint pain for the past one month. Patient is conscious, oriented, afebrile and no significant history. He had shoulder, knee and thigh pain. Patient had history of giddiness while standing and walking. Blood pressure was 160/120 mmHg on lying position with significant postural fall to 100/80 mmHg on standing. Motor power and sensory examination were normal. There was no sign of cerebellar disease. Patient had no joint swelling or tenderness and he didn't complain of feeling of warmth. Nerve conduction tests were done. The upper and lower limb electrophysiological studies were within the normal limits. Further probing revealed that the patient had taken siddha medicine for two months for skin allergy i.e past 4 months before the onset of symptoms. Sympathetic skin response showed absent waveform. A heavy metal screen by toxicology was sent and it revealed elevated levels of heavy metals such as copper 153.1 µg/dl (normal <150µg/dl), strontium 27.38 µg/L (normal= <8.38 µg/L), manganese 17.34 µg/L (normal = <1.04 µg/L). In view of the presence of peripheral nerve symptoms like feeling of fasciculation, dysesthesia and persistent pain all over body, and central nervous system symptoms like autonomic dysfunction in the form of erectile dysfunction, orthostatic hypotension and severe backache, Morvan's syndrome was thought of and test for VGKC antibody was done. CASPR2 antibody turned to be positive and LGI1 antibody was negative. Hence, an association between the siddha drug intake and Morvan's syndrome was considered in view of them being temporally related to each other. The patient was treated with methyl prednisolone (500 mg) infusion for 5 days, Indomethacin 25mg BD. The symptoms was not relieved then intravenous immunoglobulin was given, after 3 days of the therapy patient pain gradually reduced and he able to do his work.

DISCUSSION

Morvan's syndrome is a rare autoimmune disorder because of its association with VGKC antibodies (3). It is usually presented with peripheral nerve hyperexcitability with dysautonomic features, neuropathic pain, cognitive, behavioural abnormalities, insomnia and agrypnia excitation (5). Male predominance has been noticed in the reported cases and this patient also supports this finding (7). This patient had severe autonomic dysfunction, neuropathic pain and hyperexcitability. Increased serum concentration of heavy metals has been reported in Morvan's syndrome by some authors (8). This patient took siddha medicine for four months prior to the symptoms. Indian traditional medicine systems use heavy metals and minerals in preparation of medicines after purification and detoxification (9). Past studies has reported the association with some heavy metals like gold, mercury, or manganese poisoning with Morvan's syndrome (8). In this patient heavy metals such as manganese, strontium and copper were found to be increased.

The possible reason behind this syndrome could be Mn toxicity-induced cell damage, which might trigger an autoimmune antibody response against the VGKC complex (10). VGKC antibodies are believed to play a key pathogenic role in peripheral as well as the CNS manifestation. This patient turned to be positive for CASPR2 antibody and he had the peripheral as well as central CNS manifestation. Though the exact mechanism is not elucidated properly, genetic factors may play a role in metal-induced autoimmunity.

In this case, on the basis of his typical clinical features, suspected Morvan's syndrome in the patient. He was also

positive for CASPR-2.

CONCLUSION

Morvan syndrome is a rare autoimmune disease. This case report highlights the occurrence of VGKC antibody-mediated Morvan's syndrome in a patient with siddha drug intake for the period of four months prior to the development of symptoms with proven elevated heavy metal levels and antibody positivity. Careful history taking of any herbal medicine treatments and detailed examination should be done to diagnose such a rare entity of the disease.

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