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Complex Presentation of Morvan Syndrome in a Patient with Diabetes Insipidus: A Rare Case Report

Parsa Elyasi Bakhtiari[1*], Ali Azadian[1], Mohammad Shirzadi[2]

[1]Student Research Committee, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran
[2]Department of Internal medicine, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran

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***Corresponding Author:**
Student Research Committee, School of Medicine, Isfahan University of Medical Science, Isfahan, Iran

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ABSTRACT

Introduction: Central diabetes insipidus (CDI) is characterized by decreased secretion of arginine vasopressin from the pituitary, leading to increased hypotonic polyuria, hypernatremia, and polydipsia. This case presents a unique scenario of a patient with a history of diabetes insipidus who exhibited symptoms suggestive of Morvan syndrome, proven by cerebrospinal fluid (CSF) analysis. This simultaneous occurrence of two conditions may reveal the importance of exploring potential associations or shared underlying mechanisms.

Case Presentation: We present a 55-year-old woman with a 39-year history of DI who was initially admitted to the local emergency department due to several concerning symptoms, including delirium, sleep disturbances, cognitive impairment, and extremity cramps. Laboratory investigations revealed significant hyponatremia (Na = 112) consistent with uncontrolled DI. As a part of management, hypertonic saline 5% was administered over two days, resolving initial symptoms. However, her clinical course took an unexpected turn. Shortly after symptom improvement, she experienced extreme behavioral disturbances and recurrent muscular cramps. Oxygen saturation suddenly dropped, and she became unconscious. Consequently, she was urgently transferred to the ICU and required tracheal intubation. Neurological assessment and CSF analysis were performed. Notably, the autoimmune encephalitis panel revealed an elevation of anti-CASPR2 antibodies. Based on these findings, a diagnosis of Morvan syndrome was established, and she received appropriate treatment.

Results and Discussion: Antiviral treatment was applied after diagnosis of encephalitis. Due to a lack of noticeable change in her condition, the therapeutic plan changed to a pulse dosage of methyl-prednisolone after further assessment. Neurological symptoms significantly reduced after two weeks. This case highlights the intricate relationship between DI and Morvan syndrome. One plausible theory suggests that autonomic dysfunction may influence vasopressin regulation. Further exploration of this connection is essential to comprehensively understand these coexisting conditions.

Keywords: Cerebrospinal fluid, Diabetes mellitus, Neurogenic diabetes insipidus

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