Another Case of Voltage-Gated Potassium Channel Antibody-Related Encephalopathy?

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Dear Sir,

Fukushima et al. [1] describe a case of non-paraneoplastic, non-herpetic limbic encephalitis associated with episodic hypothermia. The patient's clinical history is very reminiscent of cases of limbic encephalitis associated with antibodies to voltage-gated potassium channels (VGKC) [2–4]. These patients present usually in middle age with often episodic attacks of temporal lobe seizures, memory impairment, medial temporal signal change on MRI and hyponatraemia due to the syndrome of inappropriate anti-diuretic hormone secretion (SIADH), as in the patient described. Most cases do not have an underlying neoplasm, have no evidence for infection, have an essentially normal CSF examination, and respond to immunosuppression with resolution of SIADH and signal change [3, 4]. Some patients with lower titres of VGKC antibodies may have seizures for many years [5]. The authors postulate that the hypothermia in their case was due to direct involvement of the thermoregulatory centres within the hypothalamus, and also describe features that might be compatible with autonomic dysfunction. VGKCs are located in the hypothalamus [6], and it has

been suggested that hypothalamic involvement in VGKC-related limbic encephalitis may explain the SIADH in this condition. In Morvan's syndrome, another disease associated with VGKC antibodies, abnormalities of sleep, autonomic function and circadian rhythm may also be mediated via central nervous system dysfunction [7]. Episodic hypothermia may therefore prove to be another feature of VGKC-associated limbic encephalitis. Testing for antibodies to VGKCs should be considered in patients presenting with non-paraneoplastic non-infectious limbic encephalitis, as prompt immunosuppression may be associated with a better outcome.

References

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