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### Antipsychotic Treatment Improves Outcome in Herpes Simplex Encephalitis: A Case Report

*SIR:* Herpes simplex virus encephalitis is the most common fatal sporadic encephalitis in humans.<sup>1</sup> Psychiatric symptoms, especially delusions and hallucinations, are not uncommon in herpes simplex virus encephalitis.<sup>1</sup>

The authors report a 31-year-old woman of South-East Asian origin, with no past or family history of mental illness, who had a diagnosis of herpes simplex virus encephalitis, confirmed by polymerase chain reaction. A magnetic resonance imaging of her head and an electroencephalogram were reported as normal. While on the ward, she was noted to be responding to auditory hallucinations. She was disoriented to time and place. She appeared perplexed and showed emotional lability. She showed no insight into her condition. The Adenbrooke's Cognitive Examination (ACE)<sup>2</sup> was administered, yielding a score of 74/100 with impairment evident in orientation, verbal fluency and anterograde and retrograde memory. She was discharged from hospital 6 weeks later and followed up in our neuropsychiatry clinic. Her husband reported that

she was not the person she had been. She showed marked apathy, was not interested in looking after her child and spent the whole day sitting on her sofa watching TV. In addition, he said she was experiencing significant memory problems, being unable to remember recent events in her life or people she was used to seeing. Latterly, she would start talking to strangers believing that they were known to her. On examination, she appeared distractible, focusing in turn on different aspects of the room. She showed a rather fatuous affect and occasionally giggled childishly. The authors could not elicit any overt psychotic symptoms. She showed little change over the next 5 months. The authors decided to give her a trial of antipsychotic medication, suspecting that there might have been some hidden psychotic presentation, and she was started on risperidone 1 mg twice daily. After 1 week, the patient showed a marked improvement. She started taking an interest in things around her, began to prepare meals at home and to look after her son. Her husband said that she was no longer misidentifying people. On examination, she was less distractible and slightly more articulate in her responses. The ACE score after treatment was 86/100. Furthermore, she showed some insight, recognizing that something had happened to her and beginning to remember part of her stay in hospital.

The possibility of an underlying psychotic process was raised mainly on account of her distractibility, fatuous affect and the history of misidentification given by her husband. Her rapid response to antipsychotic medication both in terms of her mental state and her functioning adds some support to this claim. The authors think that it is important to consider the possibility of an underlying psychotic ill-

ness in patients following herpes encephalitis (HSE) particularly when personality/behavioral changes and cognitive impairment are prominent and even when overt psychotic symptoms appear to be absent. Further cognitive decline after the acute stage of the illness is uncommon,<sup>3</sup> and this may also alert to the possibility of an underlying psychotic process. Awareness of such a possibility carries important implications for management and prognosis of the patient.

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### Insulinoma in Differential Diagnosis of Seizure Disorder

*SIR:* Hypoglycemia can mimic epileptic seizures, and insulinoma is one of the rarest causes of it. The authors report on a patient with hypoglycemic spells caused by insulinoma misdiagnosed as intractable epilepsy. The medical history of the case highlights the importance of careful management in the seizures of adulthood, especially in those

that are atypical and refractory to pharmacotherapy.

#### Case Report

A 42-year-old man was referred to our clinic for evaluation of recurrent seizures which had begun to occur 10 months before and were usually seen in the early morning or during tiring work. He had been diagnosed with epilepsy and anxiety disorder by a neurologist, and phenytoin and alprazolam treatment had been prescribed. The frequency of attacks had increased up to four times a week in the previous 3 months. He was referred to our clinic after these complaints. Also, he had no response to carbamazepine and levetiracetam treatment, and the electroencephalogram (EEG) performed shortly after an episode showed diffuse rhythmic theta activity.

The typical attack was seen on the first morning of hospitalization after a fast of 10 hours. It began with fatigue and psychomotor slowing. Some bizarre behaviors, like crying, "I will die" and moving his extremities aimlessly were observed, followed by loss of consciousness. The peripheral glucose level was 30 mg/dl. Upon administration of intravenous glucose solution, he became alert and all symptoms subsided after a few minutes. The blood sample sent for investigations prior to therapy also revealed the low plasma glucose (21 mg/dl) and high circulating insulin level (15  $\mu$ U/ml). The attacks did not recur with continuous intravenous glucose administration.

An abdominal MRI revealed a 17 mm round nodular mass located over the pancreatic tail. Surgical removal of the tumor resulted in complete resolution of the symptoms and reversion of the insulin and glucose levels back to normal levels. The microscopic evaluation

of removed material also confirmed the diagnosis of insulinoma.

#### Comment

Insulinomas are rare neoplasms recognized by an inappropriately high circulating insulin level, for the ambient blood glucose concentration. The most common neurological feature at presentation is confusion. As the disorder evolves, coma, motor deficits, or convulsions begin to occur.<sup>1</sup> Unless there is the presence of localized abnormalities in the cerebral circulation, low glucose level affects all cerebral neurons, resulting in a generalized dysfunction which may present as diffuse slow activity in EEG and lead the clinician to prescribe antiepileptics, as in our case. The episodic nature of hypoglycemia in insulinoma also causes the symptoms to fluctuate, and delays the diagnosis.

Confusion or bizarre behavior which could be misdiagnosed as an epileptic disorder are much more common (approximately 25%), although nearly six percent of the hypoglycemic cases present with seizures.<sup>2</sup> Hypoglycemia itself can also induce unawareness of the autonomic and neuroglycopenic symptoms and decrease the counterregulatory hormonal responses in insulinoma.<sup>3</sup> So, the unawareness of autonomic symptoms might play a critical role in misinterpretation, as in our case.

Once diagnosed as a refractory epileptic disorder, a significant proportion of patients receive aggressive and escalating pharmacotherapy. Remembering that the metabolic causes of seizures are almost always curable, and may be fatal if untreated, this report highlights the need for careful assessment of every seizure. The critical importance of assessment of blood glucose level in patients with altered level of consciousness is again impressed. Insulinoma, though un-

common, is a potentially recognizable and treatable disease, as long as there is a high index of suspicion. It should always be considered among the diagnostic possibilities in any patient with unusual or inexplicable neurological features, including atypical seizures refractory to pharmacotherapy.

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### Modafinil-Induced Reversible Hyperkinetic Nondystonic Movement Disorder in a Patient With Major Depressive Disorder

*SIR:* Fatigue, lack of energy, and lassitude are commonly reported symptoms in major depressive disorder and are likely to persist as residual conditions in patients with partial response to antidepressant therapy. Modafinil, a newer psychostimulant, has been used as an augmentation strategy to treat persistent fatigue and sleepiness in patients with major depression who are partial responders to antidepressant treatment.<sup>1</sup> Furthermore, modafinil may fasten the onset and