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To: ALL HEALTH CARE PROFESSIONALS
From: Ron Kirschner, MD, Medical Director
Subject: When altered mental status is not from an overdose: Autoimmune encephalitis
Date: 8/15/15

- Altered mental status is frequently due to overdose, but other processes can also be responsible.
- The work-up for common toxicologic, structural, metabolic, and infectious causes may be negative.
- Occasionally, the cause might be an autoimmune encephalitis: antibodies directed against brain receptors for the neurotransmitter N-methyl-D-aspartate (NMDA).
- This recently discovered disease was popularized by journalist Susannah Cahalan in her 2012 book *Brain on Fire: My Month of Madness*.
- Anti-NMDAR encephalitis typically has psychiatric, neuromuscular and, autonomic manifestations.
- Many patients have a non-specific prodrome with low grade fever, flu-like illness, and GI symptoms. This is usually followed by psychiatric effects such as bizarre behavior, agitation, and hallucinations. Neurologic effects can include cognitive dysfunction, seizures, and other dyskinesias.
- Patients are often mistakenly thought to have a psychiatric illness and started on neuroleptics.
- When symptoms worsen they may be misdiagnosed as having neuroleptic malignant syndrome.
- Anti-NMDAR encephalitis appears to be more common in young women, though men and older patients can also be affected. It is sometimes associated with teratomas.
- As a relatively new disease, it is likely under-diagnosed, though the true incidence is unknown.
- Definitive diagnosis involves detection of anti-NMDAR antibodies in CSF (preferred) or blood. Initial treatment options include steroids, IV immunoglobulins, and removal of teratoma if present.
- With correct diagnosis and appropriate care, most patients make a full or nearly full recovery.
- In patients with persistent psychiatric and neuromuscular effects despite a negative work-up, neurology consultation to consider the diagnosis of autoimmune encephalitis may be appropriate.

References

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