

INFECTIOUS DISORDERS

N-METHYL-D-ASPARTATE RECEPTOR ANTIBODIES IN HERPES SIMPLEX ENCEPHALITIS

Researchers at Charite University Medicine Berlin, and other centers in Germany, Spain and the US performed a retrospective analysis of 44 patients with polymerase chain reaction-proven herpes simplex encephalitis (HSE) for the presence of onconeural and synaptic receptor antibodies. N-methyl-D-aspartate receptor (NMDAR) antibodies of the immunoglobulin (Ig) subtypes IgA, IgG, or IgM were detected in 13 of 44 (30%) patients, suggesting secondary autoimmune mechanisms. Antibodies were often present at hospital admission, but sometimes developed after the first week of HSE. Antibody-positive sera resulted in downregulation of synaptic marker proteins in hippocampal neurons. These findings have implications for the diagnosis and treatment of HSE. (Pruss H, Finke C, Holtje M, et al. N-methyl-D-aspartate receptor antibodies in herpes simplex encephalitis. *Ann Neurol* 2012 Dec;72(6):902-11). (Response: Dr Pruss. E-mail: harald.pruess@charite.de).

COMMENT. A subgroup of patients with HSE and NMDAR antibodies may benefit from immunotherapy. NMDAR antibodies (IgG, IgA and IgM) should be determined in patients with HSE. According to an article just published online, NMDA-R antibodies should also be determined in patients acutely ill with a diagnosis of schizophrenia.

N-methyl-D-aspartate glutamate receptor antibodies and schizophrenia. Diverse NMDA-R antibodies were identified in 15 subjects, primarily those with an initial schizophrenia diagnosis (9.9%), contrasted with 2.8% in patients with major depression, and 0.4% in controls. Two patients initially classified as catatonic schizophrenia were reclassified as having NMDA-R encephalitis with specific serum and CSF IgG NR1a antibodies. All other seropositive cases had IgA or IgM antibodies. Acutely ill patients with an initial diagnosis of schizophrenia show an increased prevalence of NMDA-R antibodies. The antibody subtypes in schizophrenia, depression and HSE are different from the repertoire with NMDA-R encephalitis. NMDA-R encephalitis should be considered as a differential diagnosis, especially in young females with acute disorganized behavior or catatonia. (Steiner J, Walter M, Glanz W, et al. *JAMA Psychiatry* 2013 Jan 23:1-8).

UNUSUAL ONSET OF ANTI-NMDA-RECEPTOR ENCEPHALITIS

A 19-year-old female presented with vomiting, diarrhea, emotional lability, auditory hallucinations, expressive dysphasia, and delirium. Atypically, she had no dyskinesia, movement disorder, central hypoventilation or autonomic instability, and she had only one seizure. CSF showed 129 nucleated cells primarily lymphocytic; PCR for HSE was unremarkable, and immunofluorescence of serum and CSF was positive for anti-NMDA-R antibodies. Brain MRI showed a left temporal T2 hyperintensity. CT scan