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**[Anti-NMDA receptor encephalitis during pregnancy].**

[Article in Japanese]

[Ito Y](http://www.ncbi.nlm.nih.gov/pubmed/20196492)1, [Abe T](http://www.ncbi.nlm.nih.gov/pubmed/20196492), [Tomioka R](http://www.ncbi.nlm.nih.gov/pubmed/20196492), [Komori T](http://www.ncbi.nlm.nih.gov/pubmed/20196492), [Araki N](http://www.ncbi.nlm.nih.gov/pubmed/20196492).

**Abstract**

A 19-year-old female in her 2nd trimester (17 weeks) of pregnancy became irritable a few days before admission. She became unable to open her mouth and could not talk. She was admitted to the psychiatric hospital due to a rapid change in behavior and a consciousness disturbance. She was diagnosed as having schizophrenia by a psychiatrist. Her EEG showed diffuse high voltage and slow waves. Acute encephalitis was then suspected. Her past and family histories were not suggestive of viral infection. On physical examination, she had a low grade fever. She had hyperhidrosis, autophagia, and repeated oral dyskinesia. Her consciousness level fluctuated from somnolence to stupor. Although her blood CRP level was mildly elevated and she had mild pleocytosis, HSV-PCR was negative in the cerebrospinal fluid (CSF). Abdominal ultrasound examination and MRI showed no ovarian teratoma. Computed tomography (CT) and magnetic resonance imaging (MRI) showed no brain abnormalities. Before analysis for specific nervous system antibodies, the initial diagnosis was non-herpetic limbic encephalitis. She was twice treated with a 6-day course of methylprednisolone (500 mg/day) infusion. She was also given phenobarbital since she had a tonic-clonic seizure about 1 month after admission. Finally, she had a normal delivery at 37 weeks. The baby was healthy, and the patient was discharged without sequelae. We concluded that her diagnosis was anti-N-methyl-D-aspartate (NMDA) receptor (anti-NMDAR) encephalitis based on the presence of anti-NMDAR antibody in the CSF. This report is the first description of a patient with anti-NMDAR antibody encephalitis. The precise mechanism of this encephalitis is not clear, although there have been several reports of autoimmune encephalitis during pregnancy. The patient's CSF anti-NMDAR antibody titer during treatment was measured. Before treatment, the CSF anti-NMDAR antibody titer was strongly positive, but it decreased during treatment and then disappeared after delivery. We hypothesized that the presence of the embryo or placenta may have triggered an antigenic signal and/or antibody through inappropriate immunological modulation.