[Rinsho Shinkeigaku.](https://www.ncbi.nlm.nih.gov/pubmed/21946425) 2011 Sep;51(9):683-7.

**[Dramatic improvement in two cases of anti-NMDA receptor encephalitis after immunomodulating therapy].**

[Article in Japanese]

[Kitada M](http://www.ncbi.nlm.nih.gov/pubmed/21946425)1, [Suzuki H](http://www.ncbi.nlm.nih.gov/pubmed/21946425), [Ichihashi J](http://www.ncbi.nlm.nih.gov/pubmed/21946425), [Mitsui Y](http://www.ncbi.nlm.nih.gov/pubmed/21946425), [Tanaka K](http://www.ncbi.nlm.nih.gov/pubmed/21946425), [Kusunoki S](http://www.ncbi.nlm.nih.gov/pubmed/21946425).

**Abstract**

We report two patients with encephalitis associated with antibodies against NR1-NR2 heteromers of the NMDA receptor that showed dramatic improvement after immunomodulating therapies. A 38-year old woman (case 1) suddenly developed seizures and short term memory loss. Brain MRI appeared almost normal except for a small number of high intensity spots of white matter on T(2) weighted images. Cerebrospinal fluid examination (CFS) disclosed lymphocytic pleocytosis (61/µl) and Qualitative analysis of NR1-NR2 antibodies in both CFS and serum were positive. Although an initial treatment with high-dose methylprednisolone was not beneficial for clinical improvement, intravenous immunoglobulin (IVIg) therapy led to complete recovery from her neurological problems. Repeated general surveys showed no evidence of tumors including ovarian teratoma. A 71-year old man (case 2) suddenly developed seizures and short-term memory loss three days after receiving an influenza vaccination. Brain MRI appeared normal. CSF analysis revealed no pleocytosis and a slight elevation of protein value accompanying oligoclonal IgG band. Qualitative analysis of NR1-NR2 antibodies in both CFS and serum were positive. Intravenous high-dose methylprednisolone caused dramatic improvement and his neurological problems immediately disappeared. Repeated general surveys showed no evidence of tumors, as in case 1. These two cases showed relatively benign clinical courses with no evidence of tumors and were quite different from the well-known encephalitis associated with antibodies against NR1-NR2 heteromers of the NMDA receptor. Our clinical experience in these two cases suggests that the disease spectrum of anti-NMDA-receptor associated encephalitis might be broader than was once considered.