Introduction: Autoimmune anti-NMDA encephalitis is a disorder that affects children and young adults. This disease usually initiates with neuropsychiatric manifestations (psychosis, mania, delusions and hallucinations) and neurological ones (seizures, abnormal movements, catatonia and diskenisia), which generally respond to immunomodulatory treatment

In 2007 was described a membrane receptor with important functions in the synaptic physiology and neuronal plasticity, the NMDA glutamate receptor, and when it is attacked by autoantibodies produce a clinical syndrome because its effect in multiples areas in central nervous system with predictable phases. There are few studies reporting the outcomes in the treatment of anti-NMDA encephalitis.

The propose of this study is to report the experience in a reference hospital of neurology in Mexico City (National Institute of Neurology and Neurosurgery) of our patients who fulfilled criteria for Anti-NMDA autoimmune encephalitis according to Delmau 2016, and their outcomes during a follow up of 3 years (2013-2016) evaluating the different rate relapses between patients treated with immunomodulatory treatment and maintenance treatment.

Methods: We made an observational, longitudinal, retrospective and analytic study, with consecutive obant of patients, in our hospital who fulfilled Graus 2016 criteria for anti-NMDA-R encephalitis from 2013-2016. The analysis of data was made in patients treated with immunotherapy (plasma Exchange (PLEX), Corticosteroids) and maintenance therapy (Ciclophosphamide/Rituximab)

Results: We found 37 patients diagnosed with autoimmune encephalitis by anti-NMDA-R antibodies from 2013 to 2016, 19 of them (51.4%) were female and 18 (49%) were male. They presented a mean age of 22.7 years for women and 29.9 years for men (p = 0.057). 21.2% of patients with encephalitis relapse were identified and 78.8% corresponded to first episode. 60% of the patients were initially treated with acyclovir and 31 (93.9%) patients received immunotherapy; 30 (90.9%) 1st line and 21 (63.6%) 2nd line.

Conclusion: In our study it was observed that patients with autoimmune encephalitis who received adequate treatment based on first and second immunotherapy during their first episode had a lower rate of relapse and therefore a better prognosis, with better survival and a lower number of sequel.

The analysis shows that any treatment decrease the relapse rate nevertheless those treated with a treatment with an specific action against humoral immunity (like RTX) or those who restore the immune control stimulating regulatory T lymphpocytes (like CFM) showed a better control in the relapsing rate in comparison with Corticosteroids monotherapy even when it have been added PLEX.

We should continue following this cohort and adding new patients to reach a more relevant statistical differences.