

Prevalence Rate of N-methyl-d-aspartate (NMDA) Receptor Antibodies in First Episode Psychosis.

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Introduction

Recent literature suggests that over 70% of cases of antibody-mediated encephalitis present to psychiatry services with features of psychosis predominantly.

Aim:

To investigate the seroprevalence of N-Methyl-D-Aspartate receptor antibodies (NMDAr-Ab) in patients with first episode psychosis (FEP)

Methods:

Following ethical approval, all cases meeting entry criteria were invited to participate. Participants were interviewed with SCID to obtain a DSM diagnosis. NMDAr-Ab were identified in serum by cell based assay using co-transfected Human Embryonic Kidney (*HEK*) cells. Positive cases were reviewed by clinical neurology. Decision to treat with immunotherapy was made on a case by case basis.

Results:

85/115 (72%) of patients with FEP entered the study. 49 (58%) participants were male, mean age (SD) 37 (15.7) years. 42 (52%) were outpatients at the time of assessment. Four cases (5%) were serum NMDAr-Ab positive. 3 of these cases were male, age 48 (16.3) years. All four were admitted as inpatients with normal brain MRI imaging. One case (female, 55) was confirmed as NMDAr-Ab encephalitis based on case presentation, EEG demonstrating bilateral cerebral dysfunction and NMDAr-Ab in CSF. Immunotherapy treatment lead to clinical improvement. In remaining cases, EEG was normal and CSF negative. All 3 of these cases showed clinical improvement following psychiatric treatment as usual.

Discussion:

Our findings support the current estimates as to NMDAr-Ab prevalence in FEP. Increased awareness has lead to rapid treatment of florid cases of NMDAr-Ab encephalitis in our service. Additional seropositive cases are being followed with neuro-cognitive testing for any evidence of decline.