

to have less high risk disease. However, more studies are needed to determine whether IM medications play a role in neuro-autoimmune disease progression and mortality. A limitation of this study is that data was collected from a single institution and does not represent the general population.

**Disclosure:** Mr. Ahmed has nothing to disclose. Mr. Ahmed has nothing to disclose. Mr. Trivedi has nothing to disclose. Mr. Ors has nothing to disclose. Mr. Ahmed has nothing to disclose. Mr. Jaffry has nothing to disclose. Dr. Souayah has received publishing royalties from a publication relating to health care.

## Do Those With Neuro-Autoimmune Disease Carry a Higher Burden of Disease?

Mohsen Ahmed, Afaaq Ahmed, Ronak Trivedi, Muhammed Ors, Nabeel Ahmed, Nizar Souayah

### Objective

To investigate the burden of disease and their prognosis amongst patients with neuro-autoimmune disease (NAD).

### Background

NAD has been shown to increase overall mortality and early death among patients. However, the overall burden of disease in NAD patients has not yet been fully characterized.

### Design/Methods

A retrospective analysis on 34464 patients hospitalized at a tertiary care center in a major metropolitan area was conducted. The outcomes compared included the prevalence of comorbidities, high risk comorbidities, and rheumatoid arthritis and/or lupus (RAL) among patients with and without neuro-autoimmune disease (NAD and nNAD). The outcomes of the initial disposition after discharge, length of hospital stay, ICU admission, and death among patients with comorbidities and with or without neuro-autoimmune disease (cNAD and ncNAD) was also determined.

### Results

There is no significant difference in the level of comorbidity (53% vs 54%) or high risk comorbidities (19% vs 24%) between patients in NAD and nNAD, respectively ( $p > 0.05$ ). 4.7% of NAD and 2.2% of nNAD patients had RAL ( $p < 0.02$ ). The mortality was 5% in cNAD and 4.3% in ncNAD ( $p > 0.05$ ). ICU admissions was 16% in cNAD and 20% in ncNAD ( $p > 0.05$ ). 42% of patients in cNAD and 72% in ncNAD were discharged home ( $p < 0.0001$ ). The average length of stay was 10 and 6.7 days for patients in cNAD and ncNAD, respectively ( $p < 0.01$ ).

### Conclusions

These results suggest that NAD may not affect the overall burden of disease in patients but may increase the prevalence of RAL. Furthermore, comorbidity status may correlate with length of stay and disposition in patients with NAD.

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## “Obvious” Indications for Neural Antibody Testing in Epilepsy or Seizures: The ONES Checklist

Yiu-Chia Chang, Maryam Nouri, Seyed Mirsattari, Jorge Burneo, Adrian Budhram

### Objective

To develop a checklist that identifies patients who have “obvious” indications for neural antibody testing, and compare its diagnostic performance to predictive scores.

### Background

Numerous predictive scores have been developed to help determine which patients with epilepsy or seizures of unknown etiology should undergo neural antibody testing. However, their diagnostic advantage compared to only performing testing in patients with “obvious” indications (e.g. broader features of autoimmune encephalitis) requires further study.

### Design/Methods

We developed the “Obvious” indications for Neural antibody testing in Epilepsy or Seizures (ONES) checklist through literature review. We then retrospectively reviewed patients who underwent neural antibody testing for epilepsy or seizures at our center between March 2019 and January 2021, to determine and compare the sensitivity and specificity of the ONES checklist to the recently-proposed Antibody Prevalence in Epilepsy and Encephalopathy (APE2)/Antibodies Contributing to Focal Epilepsy Signs and Symptoms (ACES) reflex score.

### Results

One-hundred-seventy patients who underwent neural antibody testing for epilepsy or seizures were identified. Seventy-four of 170 (43.5%) with a known etiology were excluded from sensitivity/specificity analyses; none had a true-positive neural antibody. Of the 96 patients with an unknown etiology, fourteen (15%) had a true-positive neural antibody. The proportion of false-positives was significantly higher among patients with a known etiology (3/3, 100%) compared to an unknown etiology (2/16, 13%) ( $P = .01$ ). There was no significant difference of the APE2/ACES reflex score compared to the ONES checklist with regard to sensitivity (93% for both,  $P > .99$ ) or specificity (71% versus 78%,  $P = .18$ ) for true-positive neural antibodies.

### Conclusions

Compared to only performing neural antibody testing in patients with epilepsy or seizures of unknown etiology who have “obvious” indications, predictive scores confer no clear diagnostic advantage. Pre-specified definitions of what constitutes a true-positive neural antibody is required in future studies to avoid false-positives that can confound results.

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## Application of APE2 and RITE2 Scores in a Stanford Cohort of Autoimmune Encephalitis Patients

Trevor Rafferty, Anna Koeppen-Babcock, Srikanth Muppidi, Scheherazade Le

### Objective

The goal of our study was to apply the APE2 and RITE2 scores in a cohort of autoimmune encephalitis (AE) patients at Stanford with immune-mediated seizures.

### Background

Early identification and immunotherapy in those with immune-mediated seizures are associated with better neurologic outcomes and reduction of seizures. There have been previously published scoring systems to identify antibodies (Ab) and responsiveness to immunotherapy that were applied to our cohort.

### Design/Methods

This was a retrospective study at Stanford University Hospital with chart review of the electronic medical record between 2008-2021. Patients

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