Design/Methods
This retrospective, single-center (AIMS, Kochi, India) cohort study included 60 adult patients with autoimmune encephalitis who were first admitted from August 2016 till November 2021. We used a univariate binary logistic regression for the entire cohort (n = 60) or the cohort of seronegative cases (n = 54) and a two-tailed Fisher’s exact test for a small group of seropositive cases (n = 6). A Chi-square test was performed to describe the results in rare cases if logistic regression failed to work.

Results
In the entire cohort (n = 60) a statistically significant association was found between a good fast treatment response and a total count of cells in the CSF more than 4 cells/mm³ (OR 4.571, 95% CI 1.31–15.956, p = 0.017), IgG Local Synthesis (OR 7.273, 95% CI 1.562–33.863, p = 0.011), and Integrative Parameter of Local IgG Synthesis proposed by Ziadie M. et al. (OR 5.318, 95% CI 1.271–22.250, p = 0.022). Good fast response was defined as an improvement with single agent from the first line therapy by mRS-9Q of at least 3 points in case of severe disease and at least 2 points in case of moderately severe disease at the time of discharge. Higher Albumin Index values associated with higher odds of having poor GCS Score (OR 1.165, 95% CI 1.011–1.343, p = 0.035). In the cohort of seronegative cases (n = 54) we obtained similar results. In the cohort of seropositive cases (n = 6), none of the patients had a good fast response.

Conclusions
In our research, evidence of Local IgG Synthesis in CNS and CSF total cell count more than 4 cells/mm³ showed association with a good and fast treatment response in patients with autoimmune encephalitis.

Disclosure: Miss Popova has nothing to disclose. Mr. Nair has nothing to disclose. Dr. Mathai has nothing to disclose. Ms. SasiKumar has nothing to disclose. Siby Gopinath has nothing to disclose. Dr. Nambiar has nothing to disclose. Dr. Kumar has nothing to disclose. Dr. Saraf has nothing to disclose. Mrs. Leelamanni has nothing to disclose. The institution of Dr. Kannoth has received research support from Novartiz.

Recurrent Acute Necrotizing Encephalopathy with underlying RANBP2 mutation
Dhanalakshmi Angappan, Christopher Hollen

Objective
N/A.

Background
Acute necrotizing encephalopathy (ANE) is a rapidly progressive encephalopathy that can occur in otherwise healthy children after common viral infections such as influenza and parainfluenza. Most ANE is sporadic and nonrecurrent (isolated ANE). We report a case of recurrent acute necrotizing encephalitis in a boy with an identified RANBP2 mutation, which is known to account for the majority of recurrent ANE cases.

Design/Methods
CASE REPORT: Our patient is a 13-year-old boy with no significant medical or developmental history and no family history of neurodevelopmental disorders. He had his first episode at 15 months of age, which manifested as irritability, non-responsiveness and was diagnosed as acute disseminated encephalomyelitis (ADEM) and subsequently had 4 additional episodes of ANE at ages 4, 4.5, 5, and 10. After his third episode, testing for RANBP2 was performed and found to be positive. His typical presentation includes fever, staring spells, nystagmus and altered sensorium during these episodes typically within 24 hours of febrile-illness. He has had multiple triggering viral infections identified including adenovirus, influenza A and parainfluenza. Ultimately his ANE episodes were managed with iv pulse steroid therapy and IVIG. With treatment he has had a slow but nearcomplete recovery, including radiological resolution. He does have mild cognitive impairment and learning difficulties which have persisted.

Results
N/A.

Conclusions
This patient has had numerous episodes of ANE triggered by infection that have responded well to acute management without prophylactic immunomodulation. This is, to our knowledge, the first case of ANE responding to immunomodulation. This is, to our knowledge, the most non-fatal recurrence in a recurrent ANE patient.

Disclosure: Dr. Angappan has nothing to disclose. Dr. Hollen has nothing to disclose.

Primary Immune Dysregulation in Subacute Sclerosing Panencephalitis: A Case-Control Study
Vijay Varman, Vinay Suresh, Hardeep Malhotra, Neeraj Kumar, Ravindra Garg

Objective
The primary objective was to study the pattern of immune dysregulation in cases with subacute sclerosing panencephalitis (SSPE). The secondary objective was to assess the correlation between the measured immunological variables and disability/death at 6 months.

Background
SSPE is a chronic progressive neurological condition caused by a defective measles virus. It is postulated that immune dysregulation might result in persistent infection (immune evasion) as well as initiation of autoimmune phenomenon (via natural killer cells) leading to panencephalitis.

Design/Methods
This was a prospective observational study conducted at a tertiary-care referral-facility from January 2020 to September 2021. Thirty consecutive patients fulfilling the Dyken’s criteria for SSPE and 30 age-and-sex-matched healthy controls were enrolled. Immunological profile constituted by lymphocyte subset analysis, immunoglobulin levels and complement levels were done in all cases and controls. Cases were staged as per Jabbour’s system; disability was assessed using the modified Rankin Scale (mRS).

Results
Patients with SSPE had a mean age of 14.76 years (± 6.9 years). There were 25 males and 5 females; 6.7% cases belonged to Jabbour’s first stage, 40% to second stage and 53.3% to third stage. Levels of absolute lymphocyte count, B-cells, T-cells, helper T-cells and cytotoxic T-cells were significantly higher in cases. IgG, IgM and IgE levels were significantly higher while IgD levels were significantly lower in cases. At baseline, 13.3% of cases had a mRS score of 0-2 and 86.7% had a score of 3-6; at 6 months 10% had a mRS score 0-2 (favorable outcome) while 90% had a mRS score 3-6 (poor outcome). No correlation of immunological parameters with outcome was found.

Conclusions
Significant immune dysregulation in terms of lymphocyte subsets and immunoglobulin levels seem to exist in SSPE. These findings may pave the way for targeted immunomodulatory therapy that can be targeted in a larger cohort of patients.

Disclosure: Dr. Varman has nothing to disclose. Mr. Suresh has nothing to disclose. Dr. Malhotra has nothing to disclose. Dr. Kumar has nothing to disclose.
In contrast, association analysis suggests that ef- 
form by all three of these HLA-DQ molecules and other common bind- 
IgLON5275-283 in a post-translationally modi- 
putational binding predictions support similar, high binding a- 
HLA sequence binding region), suggesting a common function. Com- 
coded heterodimers are minimal (a few amino acids outside the main 
DQB1*05:03 (homozygotes: OR 30.9; heterozygotes: OR 5.6), in or- 
DQB1*01 (heterozygotes: OR 46.6), HLA-DQA1*01:01 
01 strongly supports an autoimmune basis.

Design/Methods
A multicentric cohort of 62 patients and 433 controls matched by 
principal component analysis was included. Genome-wide association 
analysis was performed with 4-digit resolution HLA imputation and 
selected 8-digit resolution validation typing. A generalized logistic 
model was used to determine the association with individual alleles and 
haplotype counts to establish haplotype associations. Furthermore, we 
computationally predicted binding of IgLON5-derived peptides to risk- 
associated HLA-molecules.

Results
Our results indicate a rank wise effect of HLA-DQA1*01:05~DQB1*05: 
01 (heterozygotes: OR 46.6), HLA-DQA1*01:01~DQB1*05:01 (ho- 
mozygotes: OR 26.9; heterozygotes: OR 2.5) and HLA-DQA1*01:04- 
~DQB1*05:03 (homozygotes: OR 30.9; heterozygotes: OR 5.6), in or- 
der of descending relative risk predisposition. Differences between 
encoded heterodimers are minimal (a few amino acids outside the main 
HLA sequence binding region), suggesting a common function. Com- 
cutational binding predictions support similar, high binding affinity for 
IgLONS275-283 in a post-translationally modified (N-deglycosylated) 
form by all three of these HLA-DQ molecules and other common binders. 
In contrast, association analysis suggests that effects of HLA-DR are likely 
explained by linkage disequilibrium.

Conclusions
This study is the, so far, largest genetic study on anti-IgLONS disease. Our 
results strongly suggest HLA-DQ over HLA-DR association, with higher 
reactivity against post-translationally modified versus physiological peptides, 
in line with reduced T cell priming against these epitopes. Further studies 
should address the functional implications of these HLA associations.

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Cohort Study of Autoimmune Encephalitis (AIE) in Pediatric and Adult Population from India-A Single Tertiary Centre Experience

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Harirama Acharya, Vikram Huded, Gopal Dash, Kuldeep Shetty S, 
Anirudh Kulkarni V, Mudasir Mushtaq Shah, Vivek J Philip

Objective
Study and compare clinico-epidemiological data and long-term out- 
comes in pediatric (<18 yrs) and adult AIE patients based on serostatus.

Background
India is a burgeoning hub for autoimmune diseases. Studies on AIE 
comparing seropositive and seronegative outcomes in pediatric and 
adult population are lacking. We highlight age and serostatus specific 
approach in low resource country settings.

Design/Methods
Retro-prospective study from Narayana Institute of Neurosciences, 
Bangalore (2016-2021) included AIE patients as per Autoimmune 
Encephalitis International Working Group and Autoimmune Enceph- 
alisit Alliance Clinicians Network. Serum and CSF autoimmune en- 
cephalitis panels, CSF meninigitis panel was incorporated to exclude 
infections and other demyelinating disorders. With phone calls and 
outpatient follow ups (1-4 yrs), results were statistically analyzed and 
compared based on age and serostatus.

Results
Adult AIE was commoner than pediatric (75% vs 25%, n = 60) and 
seronegative than seropositive (56.7% vs43.3%) with overall male pre- 
ponderance. NMDAR (11.7%), MOG (8.3%), LG1 and GAD65 (5% 
each) were common antibodies (MOG commoner than NMDAR in 
children; NMDAR, LG1 and GAD 65 equally predominant in adults). 
Common presentations included seizures (75%) and memory distur- 
bances (66.7%) independent of serostatus. There were no differences in 
MRI and EEG parameters based on age or serostatus. Methyldenislo- 
one mono-therapy (46.6%) was multitude than add on rescue immu- 
nosuppressants [IVIG (28.3%),rituximab (10%), PLEX & 
cyclophosphamide (3.3% each)]. Pediatric age, specific antibodies, status 
epilepticus and dysautonomia were markers requiring aggressive immu- 
otherapy. Oral steroids (61.7%),mycophenolate (8.3%) and azathioprine (6.7%) 
were maintenance immunosuppressants. 10% patients (mostly 
seropositive) had poor outcome with Modified Rankin Scale (MRS) >3. 
Deaths (all adults) though rare was slightly preponderant in seronegative 
type owing to lack of consent for aggressive immunosuppression. Clinical 
relapse was noted in 10% (mostly seropositive). 86% patients were 
weaned off maintenance immunosuppression (earlier in seronegative).

Conclusions
Seronegative and pediatric AIE had better long term outcomes. Methyldenisalone mono-therapy is efficacious in majority of the cases when 
started early. Early recognition and aggressive management in high risk 
groups has pivotal role. Further multi-centric studies are needed to 
confirm these findings.

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