broad range of neurologic symptoms and seronegative testing does not preclude AE.

P.004

Autoimmune Encephalitis: Modifiable and Non-Modifiable Predictors of Relapse

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Background: Approximately 25% of encephalitis cases in North America are immune mediated. For most forms of autoimmune encephalitis (AIE), risk of relapse is unclear and little evidence exists to guide which patients have the highest risk and whether standard treatments reduce this risk. Our objective was to determine the factors associated with AIE relapse. **Methods:** We performed a chart review consisting of patients with AIE presenting to the Calgary Neuro-Immunology Clinic and Tom Baker Cancer Centre between 2015 and 2020. Predictors of relapse were determined with use of t-test. **Results:** Outcome data was assessable in 39/40 patients, 17/39 (44%) patients relapsed. Seropositive patients and those with abnormal CSF were more likely to relapse, although neither reached statistical significance (p=0.12, 0.059). Patients with longer duration of steroid and steroid sparing treatment prior to relapse, and those on steroids at the time of relapse, had milder relapses (p=0.024, 0.026, 0.047). There was no difference in steroid or steroid sparing treatment use at 3, 6, and 12 months between groups. **Conclusions:** Risk of relapse in AIE is high (44%), with most relapses occurring in the first 3 years. Continuous immunosuppression lessens the severity of relapse, although our study did not confirm it reduced the occurrence of relapse.

P.005

Ovarian resection in anti-NMDAr encephalitis

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Background: Anti-N-methyl-D-aspartate receptor encephalitis (NMDArE) is commonly associated with ovarian teratomas, surgical resection of which can lead to significant neurologic improvement. However, the necessity of aggressive resection at the time of diagnosis is unknown; specifically, whether unilateral or bilateral oophorectomy, versus lesionectomy and partial oophorectomy (ovariotomy), is required. **Methods:** Eleven patients with NMDArE who underwent ovarian resection between January 1st 2012 and December 31st 2020 were retrospectively identified. Primary outcome was good one-year functional status, defined as modified Rankin Scale (mRS) score of 0-1. **Results:** Median age at encephalitis onset was 24 years (19–38); median delay from symptom onset to surgery was 39 days (16–129). Six patients (54.5%) had good mRS scores, unrelated to surgical resection type. **Conclusions:** Added clinical benefit of aggressive ovarian resection techniques at one-year follow-up was not identified in our data. Further longitudinal studies are needed to determine the indications for different surgical techniques in patients with NMDArE.

Ovarian resection approaches and associated functional outcomes in patients with NMDArE

Surgical approach, n (%)	mRS 0–1 at1-year, n (%)	mRS 2-6 at1-year, n (%)
Unilateral ovariotomy, 1 (9)	1 (100)	0 (0)
Unilateral oophorectomy, 5 (46)	3 (60)	2 (40)
Bilateral ovariotomy, 1 (9)	1 (100)	0 (0)
Bilateral oophorectomy, 4 (36)	1 (25)	3 (75)

P.006

Neural antibody testing for autoimmune encephalitis: A Canadian single-centre experience

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Background: We reviewed our autoimmune encephalitis neural antibody testing using brain tissue indirect immunofluorescence (TIIF) and cell-based assays (CBAs) after one year. **Methods:** Samples were tested from March 2019–March 2020 by TIIF and CBA for anti-NMDAR, LGI1, CASPR2, AMPAR, GABA(B)R, DPPX, IgLON5 and GAD65. Weakly positive or positive CBA, with or without corresponding TIIF positivity, was reported positive. Clinical questionnaires were submitted for clinical-serological correlation. Patients with a compatible clinical phenotype and no more likely alternative diagnosis were classified as true-positives, while all others were flagged as possible false-positives. **Results:** Twenty of 373 patients (5.4%) had a positive neural antibody. All anti-LGI1 (N=4), GAD65 (N=4), and GABA(B)R (N=1) were classified as true-positives. In contrast, only 3/6 anti-CASPR2 and 3/5 anti-NMDAR were classified as true-positives. Among true-positives, 2/4 anti-LGI and 3/3 anti-CASPR2 were positive by CBA only. All possible false-positive results exhibited only weak serum staining by CBA, with negative serum TIIF and negative CSF CBA/TIIF (if available). **Conclusions:** Clinical sensitivity of CBA seems higher than TIIF for neural antibodies studied herein, but may come at some expense to clinical specificity. Among patients with weak serum staining by CBA, correlation with serum TIIF, CSF CBA/TIIF, and clinical presentation is recommended.