9 EARLY AND LATE CLINICAL FEATURES IN 171 PATIENTS WITH LGI1-ANTIBODY ENCEPHALITIS

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Objectives LGI1-antibody encephalitis (LGI1-AbE) is a common form of autoimmune encephalitis. Despite almost universal responses to immunotherapy, patients can have a variety of outcomes and sustained disability. We initiated an international consortium to define the clinical profile of this disorder.

Methods We performed detailed phenotyping of clinical, therapeutic and outcome data in 171 patients with LGI1-AbE from the UK, South Korea, USA, Germany, Switzerland, and Australia.

Results Median age of onset was 62 years (range 22–92). 68% (116/171) were male. The median follow up was four years (range 1–15 years). 23% (39/171) had a history of autoimmunity. 11% (18/171) had an associated malignancy. 35% (59/171) had a relapsing course, with thyroid autoimmune disease being the most common disorder (8%). Patients manifested a mean of two seizure semiologies, including faciobrachial dystonic seizures (57%), focal with loss of awareness (40%), generalised tonic clonic (32%), focal with awareness (19%), thermal seizures (7.5%), and paroxysmal dizzy spells (7.5%). 92% exhibited cognitive disturbance. 59% experienced psychiatric/behavioural features (anxiety 39%, disinhibition 36%, psychosis 36%, depression 27%). 70% experienced sleep disturbance (insomnia 55%, hypersomnolence 32%, sleep wake reversal 18%, parasomnia 11%). Despite seizure resolution in over 90%, 82% experienced late features including emotionality (51%), loss of libido (29%), apathy (28%), anhedonia (22%), obsessive compulsive disorder (21%), sweet food preference (19%), impulse control disorder (12%), and loss of taste/smell (7%).

Conclusions In an international cohort of LGI1-AbE, we identified not only well-recognised acute manifestations, but also only recently-recognised late clinical features which substantially impact quality of life.

10 MRI PERFUSION OF PROXIMAL NERVE ROOTS CAN HELP IDENTIFY INFLAMMATORY NEUROPATHIES

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Background Dynamic contrast-enhanced-MRI (DCE-MRI) has shown promise in assessment of peripheral neuropathies.[1 2] The aim of this study was to use DCE-MRI to obtain perfusion parameters, including the plasma to extravascular volume transfer (Ktrans) and the extravascular fluid volume (Ve) in patients with inflammatory neuropathies and controls.

Methods We recruited patients who presented with Gullain-Barre syndrome (GBS) or active Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP) (new diagnosis or relapse) for this study between 2019 and 2022. Patients with genetic neuropathies and patients who were undergoing routine MRI scans post lumbar discectomy formed the control group.

3T-MRI examinations of the lumbo-sacral spine were carried out on participants including T1 weighted DCE volume interpolated breath-hold (VIBE) sequences with gadolinium-based contrast agents. Ktrans and Ve maps for motor nerve roots (MR), sensory root (SR), dorsal root ganglion (DRG) and mixed spinal nerves (MSN) were generated using the Tofts Model.[3–5]

We calculated the ratio of the Ktrans of the MSN to that of the MR and similarly that of the SR to the DRG at the L4, L5 and S1 root bilaterally. A linear mixed model analysis was used to compare differences between the two groups.

Results We analyzed 32 nerve segments from controls (n=7) and 43 nerve segments from patients with GBS/CIDP (n=11). The Ktrans ratio was for both motor and sensory roots were higher in the patients with inflammatory neuropathies than controls ($p<0.05$).

Conclusions DCE-MRI of proximal nerve roots may help complement other modalities in the diagnosis of inflammatory neuropathies.

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