

## **Suggested category 6 - Cognitive neurology/neuropsychology**

### **Authors**

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### **Title (max 25 words):**

Neuropsychiatric and quality-of-life assessments in 60 patients after LGI1-antibody disease demonstrates fatigue as the key determinant of personal wellbeing

### **Background and aims:**

Despite increasing awareness and early treatment of LGI1-antibody encephalitis, long-term outcomes remain poorly reported. Previous smaller studies have identified multiple deficits in cognitive recovery but few explore psychiatric aspects or quality of life (QoL). Here, we delineate long-term follow up of multiple cognitive and neuropsychiatric domains, plus QoL, in a substantial cohort of patients after LGI1-antibody disease.

### **Methods:**

60 patients were recruited at a median of three years (range 0.3-15 years) post-disease onset. All underwent a detailed, face-to-face interview using validated questionnaires covering domains that, from clinical observations, we had detected to be impaired in this cohort. Clinical, paraclinical and genetic parameters were also collected. Statistical analysis comprised binomial tests, simple and multiple regressions, and a latent variable model, with the LGI1-antibody group's results compared to age-appropriate scores in the literature.

### **Results:**

Deficits were seen in 5-52% (mean?) of patients across disability, cognition, neuropsychiatry, QoL, and fatigue measures (Figure). Within cognition, attention and orientation were spared, but patients scored significantly worse versus controls in episodic and verbal memory, fluency and visuospatial capabilities. Significant QoL worsening after illness was confirmed by two separate instruments, which were closely correlated and could be represented by a latent variable model. Multiple regression analysis identified fatigue as an independent predictor of QoL, and fatigue correlated better with QoL than the modified Rankin Score.

### **Conclusions:**

Patients demonstrate widespread difficulties many years after an acute LGI1-antibody episode. Fatigue is the most accurate predictor of long-term QoL, and work should start within the neurology community to identify the presence and treatments of this disabling symptom.

**(Total for abstract 250 words – words at present 250)**