FTD syndrome. Plasma NfL was significantly higher in the FTD group compared to phFTD (p = 0.002). There was a trend towards a higher median NfL in bvFTD compared to phFTD (p = 0.14). NfL [median (interquartile range) pg/mL] was comparable in bvFTD [41.10 (50.72), n=20], semantic variant FTD [44.38 (16.61), n=11] and non-fluent variant FTD [42.61 (22.93), n=9]. It was highest in FTD with motor neuron disease [79.67 (45.32), n=4], and lowest in phFTD [13.99 (0.79), n=2] and 'slow progressors' [17.97 (3.62), n=3].

Conclusion Plasma NfL appears to be able to differentiate subtypes of true FTD from phFTD in this exploratory analysis. Further studies should be undertaken with larger samples of patients from all clinical groups to confirm these findings and establish cut-points for each syndrome.

2294 NON-FATAL CEREBRAL ARTERY AIR EMBOLISM DUE TO PULMONARY BAROTRAUMA FROM A PNEUMATOCELE DURING COMMERCIAL AIR TRAVEL

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Cerebral air embolism is a catastrophic phenomenon described in trauma, vascular intervention, barotrauma related to positive pressure ventilation, SCUBA diving and rarely air travel.[1] A 71-year-old woman was found unrousable at the end of an uneventful three-hour flight on a small aircraft. On examination, she was obtunded, without lateralising or brainstem signs, and a possible seizure was witnessed. She was loaded with antiseizure medication and intubated for airway protection.

Initial CT stroke protocol showed bilateral frontal lobe attenuation without perfusion deficit or vessel occlusion. Lumbar puncture revealed elevated protein with normal cell count, and EEG showed generalised, bifrontal predominant asymmetric slowing. The clinical impression was of acute encephalopathy; infective, toxic and metabolic screens were unremarkable, no further seizures were observed. Antibiotics and antivirals were discontinued, autoimmune aetiology was considered, and IVIG commenced. Serial MRI Brains demonstrated progressive bilateral cortical and thalamic T2 changes with initial areas of enhancement and progressive milary cortical susceptibility foci on SWI. Despite treatment, there was minimal initial recovery. Autoimmune markers in blood and CSF were negative. CT chest to exclude malignancy revealed a right pneumatocele. We concluded diffuse ischaemic injury had occurred secondary to air embolism. No intravascular gas was seen on imaging review. Our patient was outside the time frame for hyperbaric oxygen therapy. She slowly recovered but was discharged with significant deficits to a nursing home.

This case highlights a rare phenomenon due to atmospheric pressure changes during flight in patients with pulmonary pneumatoceles/cysts. Timely recognition is essential to facilitate treatment.[2]

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2296 COGNITION, ADAPTIVE SKILLS AND EPILEPSY DISABILITY/SEVERITY IN PATIENTS WITH LENNOX-GASTAUT SYNDROME UNDERGOING DEEP BRAIN STIMULATION FOR EPILEPSY

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Objective We describe the properties of six cognitive tests and their utility in young adults with Lennox-Gastaut syndrome (LGS) undergoing a deep brain stimulation (DBS) treatment trial ('ESTEL': Electrical Stimulation of Thalamus in Epilepsy of the Lennox-Gastaut phenotype), assessing for changes in outcomes after 3-months of treatment.

Methods Twenty ESTEL patients with LGS (17–37 years;13 females) were studied; one participant was not randomised due to device removal, with outcomes of 19 remaining participants reported. All had cognitive/behavioural testing administered at baseline (i.e., pre-DBS implantation), end of the blinded phase and study exit. Testing batteries measured cognition (NIHTB-CB), adaptive skills (ABAS-3), epilepsy severity (GASE)/disability (GAD), quality of life (QOLIE-31) and depression (PHQ-9). Changes in test scores after 3-months of DBS-treatment were compared to baseline (Wilcoxon signed rank test).

Results No deterioration in tests scores was observed after 3-months of DBS treatment, and epilepsy severity (GASE) improved (P=0.03). Testing that relied on participants, rather than caregivers could only be completed only by higher-functioning individuals (NIHTB-CB, n=13; QOLIE-31, n=3; and PHQ-9, n=6), with behavioural and physical limitations further adding to difficulties with test administration. Standardised scores were hindered by a 'floor effect', with use of raw scores revealing variability amongst participants in order to assess for changes post-treatment.

Conclusion DBS treatment is associated with reduced epilepsy severity and disability in young adults with LGS. Performing neuropsychological outcome testing in patients with cognitive impairment is challenging but possible and requires careful selection of testing batteries and modifications of test interpretation to avoid floor effects.

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