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Epilepsia®

MISCELLANEOUS

14th European Epilepsy Congress Geneva, Switzerland | 9-13 July 2022 SATELLITE SYMPOSIA ABSTRACTS

Satellite Symposium

Saturday, 9 July 2022
LIVANOVA
16:30 – 18:00

MECHANISMS IN DRUG-RESISTANT EPILEPSY
Chair: Lieven Lagae (Belgium)

Satellite Symposium

Saturday, 9 July 2022
Takeda
16:30 – 18:00

MORE THAN MEETS THE EYE: ILLUMINATING THE LGS PATIENT JOURNEY
Chair: Renzo Guerrini (Italy)

Lennox-Gastaut Syndrome (LGS) is a severe, childhood-onset syndrome that comprises ~4%-10% of childhood epilepsy. 1 LGS has a major physical impact on a child, with a high frequency of seizures, and high rate of seizure-related injuries. 2 Prognosis is poor, as less than 10% achieve seizure freedom as adults. 1 Most individuals with LGS develop intellectual disability and other behavioral concerns. 1 The burden of caring for a child with LGS is high, with increased anxiety about injury from seizures as well as the emotional, physical and social strain associated with providing continuous care. 2 This 60-minute Takeda-organized and sponsored medical symposium, featuring Professors Nicola Specchio and Renzo Guerrini, will explore the LGS patient journey by discussing meaningful aspects from both the caregiver and physician points of view. Professor Specchio will share a hypothetical patient case compiled from literature and physician experiences that will span the LGS patient journey from early symptoms, the search for answers and a diagnosis, and day-to-day living with LGS. Professor Guerrini will discuss the patient journey from the clinical perspective including aspects around the causes and diagnosis of LGS, its associated caregiver burden, and treatment goals focused on quality of life. The symposium will help attendees appreciate and understand the challenges and difficulties associated with diagnosis of LGS, everyday assessment tools, day-to-day impact on the caregiver and family as a whole, and key treatment goals. References 1. Ostendorf AP, Ng YT. Treatment-resistant Lennox-Gastaut syndrome: therapeutic trends, challenges and future directions. Neuropsychiatr Dis Treat. 2017;13:1131-1140. 2. Gallop K, Wild D, Nixon A, Verdian L, Cramer JA. Impact of Lennox-Gastaut Syndrome (LGS) on health-related quality of life (HRQL) of patients and caregivers: Literature review. Seizure. 2009;18:554-558.

Satellite Symposium

Sunday, 10 July 2022
Persyst ESI
08:00 – 09:30

INVESTIGATING THE SOURCE OF THE PROBLEM - ELECTRICAL SOURCE IMAGING
Chair: Caroline Neuray (Belgium) & Marie Terrill (USA)

Satellite Symposium

Sunday, 10 July 2022
GW Pharmaceuticals (part of Jazz Pharmaceuticals)
13:45 – 15:00

ALL THAT JAZZ: HOW DOES CANNABIDIOL CHANGE OUTCOMES IN PAEDIATRIC PATIENTS WITH LGS AND TSC?
Chair: Christoph Hertzberg (Germany)

Conclusion: Our data demonstrate that a murine model of FCD is associated with seizure clustering similarly to other epilepsy models and human patients. We described the internal dynamics of the clusters, namely the gradual increase of seizure duration and severity. These data could contribute to a better understanding of seizure predisposition.

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726 | Focal neuronal lipofuscinosis causing medically refractory frontal lobe epilepsy: paediatric case report of an ultrarare histology in epilepsy surgery

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Purpose: There are only 7 reported cases in literature of focal neuronal lipofuscinosis (FNL) in epilepsy surgery specimens- all affecting frontal lobe[2]. We describe the 2nd paediatric case overall. This case is the only one with clinical exome sequencing (CES) done preoperatively- reported normal.

Methods: We report clinical and 2 stage presurgical evaluation details of a 12 year old, right handed girl with medically refractory epilepsy. Focal seizures started at 10 years of age. The semiology was stereotypical- aura of heaviness in right upper limb, behavioural arrest, head/trunk version to right and an unusual smile with rare right upper limb clonic jerking and/or a fall. No postictal upper limb weakness noted. Past medical history was insignificant. Her grandfather had epilepsy. 1st stage presurgical evaluation was strongly suggestive of left prefrontal localisation (dominant lobe) but was MRI negative. Stereo EEG implantation in left frontal lobe showed distinct epileptogenic abnormality over the left middle frontal gyrus (LMFG).

Results: Tailored resection of LMFG was done- guided by intraoperative monitoring and neuronavigation. Patient developed transient expressive aphasia. She is now seizure free for 2 years postoperatively. Histopathology and immunohistochemistry of surgical specimen showed dysmorphic neurons with accumulation of lipofuschin.

Conclusion: FNL is an ultra rare, histologically identified etiology of medically refractory frontal lobe epilepsy. Lipofuschin is proposed to be result of autophagy in dysfunctional neurons- mediated by genes which control autophagy and vesicle trafficking[1]. Cases in literature experienced seizures for mean of 16.6 years (range 8–25) preceding surgery. The distinct features of shorter duration of preceding seizures (2 years in this child) and normal CES have the potential to further the understanding of pathogenesis of FNL.

References:

1. Liu et al Ann Neurol 2016;80:882–895
2. Mhatre et al Epilepsy Behav Rep. 2020; 14: 100369

727 | Epileptogenic low grade gliomas: treatment results

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Purpose: Seizures are the most common presenting symptom of newly diagnosed low-grade gliomas (LGG) and significantly impair quality of life. Achieving freedom from seizures is one of the main goals of surgical treatment.

Methods: A retrospective analysis of 135 surgical interventions on epileptogenic LGG that were performed at the Municipal Non-profit Enterprise "Regional Clinic Center Of Neurosurgery And Neurology" Transcarpathian Regional Council during the last 9 years (January 2013 to January 2022). Patients with post-operative follow-up more than one year were assessed according to Engel scale.

Results: Seizures were the presenting symptom in 71% of patients with LGG. Astrocytomas were the most frequent histological type of LGG (74%). There were 75% Engel class I, 20% in class II, 2.5% in class III, 2.5% in class IV patients. Engel class I was in 71% of patients with total tumor removal and in 65% of patients with subtotal/partial removal. No significant differences in seizure outcome were observed between astrocytic versus oligodendroglial tumors.

Conclusions: Seizure control is one of the most important considerations in planning surgery for low-grade brain tumors. Surgical treatment, particularly gross tumor resection, contributes strongly to seizure freedom.