

Co-morbidities: Neurobehavioral Aspects of Epilepsy

W. Curt LaFrance, Jr., MD

Brown Medical School / Rhode Island Hospital

Curing Epilepsy Conference 2007

28 March 2007



BROWN UNIVERSITY



Acknowledgements

Brown Psychiatry & Neurology

Ivan Miller PhD

Andrew Blum MD, PhD

Christine Ryan PhD

Jennifer Davis PhD

Gabor Keitner MD

Rhode Island Hospital staff

Jackie Albro

Lara Boyken

Anita Curran

Anna Eng

Kirsten Johnson

Joan Kelley

NINDS Staff

Margaret Jacobs

Lynn Rundhaugen

Christina Vert

NES Consultants

Orrin Devinsky MD

Michael Trimble MD

NINDS Intramural Collaborators

Valerie Voon MD

Funding

NINDS K-23

NIMH T-32

American Epilepsy Society

Epilepsy Foundation

Rhode Island Hospital

Other

Bio-Logic Systems Corporation

Patients and their families

Neurobehavioral Aspects of Epilepsy: Overview

- “Treating the seizure is not the sum of treating the patient with epilepsy.”

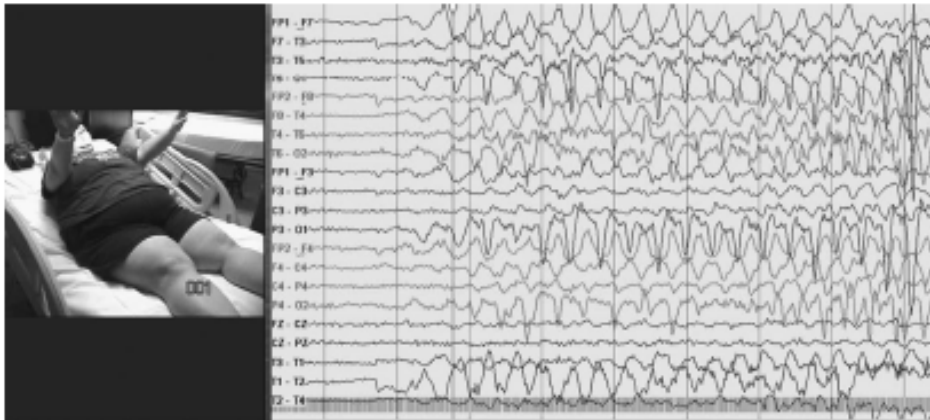
-Michael Trimble



- Neuropsychiatric
- Neuropsychological
- Quality of Life



Neurobehavioral Aspects of Epilepsy: Areas of investigation



(from Benbadis. The EEG in NES. *JClinNeurophys.* 2006)

- **Neuropsychiatry**

Comorbid Depression

Ictal – Peri-ictal Psychosis

Kindling

Nonepileptic seizures (NES)

- **Neuropsychology**

Memory and Cognition

Attention/Awareness

Language

Motivation

- **Quality of Life**

Nonepileptic Seizures

Pilot Pharmacologic Randomized Controlled Trial

(n = 29) all enrollees, baseline evaluation

- **Demographics:**

75% female, mean 37 years old, 41% married

- **Social:**

High school education; 69% unemployed; 28% driving

- **Co-morbidities:**

70% Mood disorders; 90% Anxiety disorders; 82% h/o Abuse

- **Neurologic:**

45% Abnormal Brain MRI; 31% Abnormal EEG;
50% Family History of seizures

NES Pilot Psychotherapy trial

Assessment Ratings at Baseline and Completion (N = 18)

- **NES patients are symptomatic on a number of fronts**
- **NES randomized treatment trials are feasible**
- **Neuropsychiatric patient clinical research requires solutions that are complex, global, and multi-disciplinary**

Neurobehavioral Aspects of Epilepsy: Future directions in NES Programmatic Research

- **NES Diagnosis**

 - NES SCID module

 - NES comorbidities

- **NES Etiology**

 - Functional Neuroimaging / Neurogenetics/

 - Neurophysiology / Animal Models

- **NES Treatment(s)**

 - Pharmacologic

 - Psychotherapy(ies)

 - Combined Treatments

- **NES Prevention**

