Lennox-Gastaut Syndrome Roundtable

Raj Sheth, MD
Randa Jarrar, MD
Blanca Vazquez, MD
Clinical Presentation of LGS
(Epidemiology, Seizures, Cognition, Other problems)

Raj D Sheth, MD
Epidemiology LGS

- 1-10% of all childhood epilepsy
  - 10% in tertiary epilepsy clinic
- Population based surveys
  - 0.26 per 1,000


Lennox-Gastaut Syndrome

- Intractable tonic, atonic, myoclonic, or absence-like seizures
- Multiple etiologies
- Mental retardation
- Slow spike and wave EEG (2-3 Hz)
- Electro-decremental response

Lennox-Gastaut Syndrome

- Slow spike & wave (2 Hz)
- Seizures
  - Tonic
  - Atonic
  - Atypical Absence
- MR

LGS Etiologies
ILAE Classification of LGS
EEG correlates of seizure type

Lennox-Gastaut Syndrome - EEG

- **Slow spike and wave**
  - Biphasic or triphasic surface negative sharp waves followed by high-voltage negative slow waves
  - Usual frequency 1.5-2.5hz (1-4 hz)
  - Bilateral
  - Synchronous & symmetrical
  - Maximal over frontal head regions
  - Enhanced during NREM sleep
  - Most are interictal, without clinical correlate

Lennox-Gastaut Syndrome - EEG

• Paroxysmal fast activity
  - Predominately during sleep
  - Diffuse, bilaterally synchronous
  - 15-20 seconds
  - Highest voltage in frontal areas
  - Majority are without clinical correlate
Lennox-Gastaut Syndrome: Sleep EEG
Atonic seizure in LGS
“Drop Attacks”

1960 Lennox: Number of lifetime tonic-clonic seizures is related to risk of mental handicap.
1977 Dikmen:
IQ is lower in childhood onset epilepsy

Early onset (0-5 yrs), N=32
Late onset (17-50), N=32
Other problems in LGS

- Adverse effects of multiple AEDs
  - Cognitive

- Bone health
  - Osteopenia
  - Drop attacks
  - Falls


Thank you