Pediatric Seizure
Semiology:
Role of video EEG
Joseph E. Sullivan, M.D.

Outline
- Neonatal seizure
- Infantile spasms
- Myoclonic/astatic
- Atonic/focal atonic
- Eyelid myoclonia

Neonatal semiology
- Clonic
- Tonic
- Myoclonic
- Subtle
  - May NOT have associated EEG change
Infant semiology
- Limitations of the ILAE classification
- Different clinical expression
- Typical behaviors, i.e., auras are absent or unreliable
- Symmetric tonic posturing or spasm may be focal or generalized

Spasms
- May be clinically asymmetric or be followed by focal clonic seizure
- May be symmetric but still have focal EEG features
- Both may suggest an underlying focal structural abnormality

Blinks, jerks, and falls
- Absence, myoclonic seizures, and atonic seizures are almost always GENERALIZED
- Further syndromic classification may be possible
- Help guide treatment strategies & prognosis
Pediatric Syndromes

- Myoclonic/astatic epilepsy (Doose’s)
- Atypical benign partial epilepsy
- Syndromes with eyelid myoclonia

Doose’s Syndrome

- 18 months-5 years (peak 3 years)
- Brief myoclonic/astatic seizures (<0.5 sec)
- Atypical, absence, GTC’s, later tonic
- Rx with valproate, levetiracetam, clonazepam
- Consider early referral for ketogenic diet
- Prognosis dependent on seizure control
Atypical benign partial epilepsy

- Children often have classic BRECT phenotype
- Then begin having “falls”-pseudo-Lennox syndrome
- This may be seen after treatment has started specifically with CBZ/OXC.

Eyelid myoclonia

- Part of absence “plus” syndromes-Jeavon’s syndrome
- May lead to overestimation of true absence burden
- Often refractory to treatment and often does not remit in later childhood
- Fixation on/off sensitivity
- Photosensitive

Conclusions

- Video EEG is critical for semiologic characterization of seizures in younger children
- May lead to more specific syndromic diagnoses
- Better management including guiding work-up, treatment, and possibly prognosis