



# Epilepsy Management

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# Disclosures

- Paid consultant for Cyberonics



# Presentation Goals

- Define epilepsy
- Identify goals in therapy
- Define intractable epilepsy
- Describe therapy options



# Seizures

- A seizure is abnormal & excessively synchronized neuronal discharge
- Results in clinical events
- Symptom based upon location
- 10% of population



# Epilepsy

- Recurrent, unprovoked seizures
- 1% prevalence (common)
- Incidence highest with the very young & very old (highest)
- Mortality 2-5x greater than general population



# Seizure Types by Onset

- Generalized
  - Tonic
  - Clonic
  - Tonic-clonic
  - Myoclonic
  - Atonic
  - Absence



# Seizure Types by Onset

- Partial or focal
  - Simple partial, “aura”
  - Complex partial, “dyscognitive features”
  - Focal onset with secondary generalization







# Diagnosis



- History
- Physical examination
- Supporting diagnostic studies: EEG, MRI, LP, Laboratory studies, Others in special circumstances
- Decision to treat (medication)



# Goals of Therapy

- No seizures
- No side effects
- No restrictions
- Do we meet these goals?



# Goals of Therapy

- Study of 525 pts, 470 new onset
- 2/3 seizure free
- 64% seizure free after first drug
- 14% after 2<sup>nd</sup> or 3<sup>rd</sup> drug
- 3% 2 drugs
- 11% seizure free if first drug ineffective

Reference: Kwan P, et al. N Engl J Med. 2000; 342; 314-319.





# Medically Refractory Epilepsy

- Failure after 2-3 appropriately selected medications
- Adequate medication trial?
- Reconsider diagnosis



# Other Treatment Options

- Ketogenic Diet
- Surgical options
  - Palliative
  - Resective (Wiebe et al 2001)

Reference: Wiebe S, et al. N Engl J Med. 2001; 345: 311-318.



# Seizure Freedom Following Temporal Lobectomy

- 80 randomized patients
- 58% of surgical group seizure free with/without aura
- 64% of surgically treated group
- 8% medical group seizure free
- One case of SUDEP in medical group



# Summary

- Seizure/epilepsy
- Treatment goals
- Medically refractory epilepsy
- Treatment options



# Summary

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