SEIZURES AND DEPRESSION

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GENERAL DISCLOSURES

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SPEAKER DISCLOSURES

✓ Honorarium from Academy of Psychosomatic Medicine - 2016
✓ No other conflicts to report
OBJECTIVES

1. Described the relationship between seizures and depression
2. Describe the relationship between SI and seizure patient with co-morbid depression
3. Discuss the risks/benefits of treating comorbid depression in patient with seizure
SEIZURES

• Seizure disorder = Epilepsy
• Involuntary activity in the brain
• 5/1000 people to 10/1000 people with 50/100,000 new diagnoses of epilepsy each year. Sander JW. The epidemiology of epilepsy revisited. Current Opinion in Neurology 2003;16(2):165–70.
• Multiple medical problems can present with seizure
QUESTION 1

• Seizures protect against depression?
  True
  False
QUESTION 1

• Seizures protect against depression?
  True
  False
PSYCHIATRIC COMORBIDITY & SEIZURES

• Seizures and neuropsychiatric comorbidities are not a new observation
  • Hippocrates 1st commented on melancholy and depression

  Lewis. A Melancholia: a historical review J Ment Sci, 80 (1934), pp. 1–42

• Noted that depression and seizure disorders can occur together

• Depression and anxiety have a bidirectional relationship with seizure disorders


- Systematic Review assessing barriers to AED adherence
  - Anxiety and depression common causes
  - Others include: beliefs about medication
  - Poor memory and self medication management
  - Multiple medications
PSYCHIATRIC COMORBIDITY & SEIZURES

- Life time prevalence of depression in seizure disorders 20 - 60% 

- Maybe more likely to develop depression if foci is front or temporal
SPECIFIC DIAGNOSTIC CONSIDERATIONS

• Often helpful to describe symptoms as occurring
  • Preictal
  • Postictal
  • Interictal
• Unlike anxiety/aggression/confusion, depression is most commonly interictal phenomenon.
• Monitor for loss on interest in activities
## ICTAL VS NONICTAL

<table>
<thead>
<tr>
<th>Appearance of symptoms</th>
<th>Length of symptoms</th>
<th>Associated symptoms</th>
<th>Consciousness</th>
<th>Recall</th>
<th>Episode EEG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ictal</td>
<td>short &lt; 3 min</td>
<td>stereotyped motor</td>
<td>Maybe altered</td>
<td>Limited</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Nonictal</td>
<td>&gt;20 min</td>
<td>None</td>
<td>Generally intact</td>
<td>Intact</td>
<td>Normal</td>
</tr>
</tbody>
</table>

QUESTION 2

• Suicide rates are highest prior to a diagnosis of a seizure disorder?
  True
  False
QUESTION 2

• Suicide rates are highest prior to a diagnosis of a seizure disorder?
  True
  False
SUICIDE & SEIZURE DISORDERS

• Suicidal ideation and suicide risk are 2x higher than the general population
• Suicide is associated with up to 5% of all epilepsy deaths
• Highest risk periods are within 6 months of diagnosis and within a year of gaining good seizure control
• Never be afraid to screen and safety plan with these patients

TREATMENT OF DEPRESSION IN SEIZURE DISORDERS

• Yoga
  • Limited data, but maybe better than no movement therapy
  • No evidence for uncontrolled seizures
TREATMENT OF DEPRESSION IN SEIZURE DISORDERS


- Some evidence that CBT focusing on acceptance, coping skills, and depression management is effective
- However, study quality are at risk of bias
QUESTION 3

• With a few key exceptions, antidepressants do not clearly destabilize seizure control

True
False
QUESTION 3

• With a few key exceptions, antidepressants do not clearly destabilize seizure control

True
False
ANTIDEPRESSANTS & SEIZURE RISK

• Antidepressants are often described as inducing seizures
  • Most of this data comes from overdoses or overdoses in animal models
    • R. Ribot et al. / Epilepsy & Behavior 70 (2017) 5–9
    • R. Clinckers, I. Smolders, A. Meurs, G. Ebinger, Y. Michotte Anticonvulsant action of hippocampal dopamine and serotonin is independently mediated by D2 and 5-HT₁ receptors J Neurochem, 89 (2004), pp. 834–843 - 900% therapeutic level
IMPACT OF ANTIDEPRESSANTS ON SEIZURES

• Ribot R, Ouyang B, & Kanner 2017
  • Retrospective 100 patient with epilepsy
  • < 1 seizure/month went on to have ≥ 1 seizure/month after initiating treatment with antidepressants
  • no seizure recurrence among patients that had been seizure-free
  • ≥ 1/month, 27.5% had a reduction in seizure frequency to < 1/month
  • ≥ 1 seizure/month, 48% exhibited a > 50% reduction in seizure frequency
IMPACT OF ANTIDEPRESSANTS ON SEIZURES

• Maguire MJ, Weston J, Singh J, Marson AG. Antidepressants for people with epilepsy and depression. Cochrane Database of Systematic Reviews 2014
  • Unable to do a meta-analysis
  • No clear association between antidepressants and increased frequency of seizures
ANTIDEPRESSANTS TO AVOID

- Bupropion
- Maprotiline
- Clomipramine
- Amoxapine
Kanner AM. Most antidepressant drugs are safe for patients with epilepsy at therapeutic doses: A review of the evidence Epilepsy & Behavior Volume 61, August 2016, Pages 282–286

Table 1. Efficacy and doses of SSRIs and SNRIs in primary depression and anxiety disorders.

+: used for the treatment of this condition. ++: has FDA indication for this condition. a SSRI. b SNRI.

<table>
<thead>
<tr>
<th>Antidepressant drug</th>
<th>Depression</th>
<th>Panic disorder</th>
<th>Generalized anxiety</th>
<th>Starting dose</th>
<th>Maximal dose</th>
<th>Inhibits some AEDs</th>
<th>Clearance increased by EIAED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paroxetine(^a)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>10</td>
<td>60</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sertraline(^a)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>25</td>
<td>200</td>
<td>Mild</td>
<td>Yes</td>
</tr>
<tr>
<td>Fluoxetine(^a)</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>10</td>
<td>80</td>
<td>Yes</td>
<td>?</td>
</tr>
<tr>
<td>Citalopram(^a)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>10</td>
<td>60</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Escitalopram(^a)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>5</td>
<td>30</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Fluvoxamine(^a)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>50</td>
<td>300</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Venlafaxine(^b)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>37.5</td>
<td>300</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Duloxetine(^b)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>20</td>
<td>120</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
QUESTION 4

• Topiramate has been found to always improve concentration and memory in seizure disorders patients.

True
False
QUESTION 4

• Topiramate has been found to always improve concentration and memory in seizure disorders patients.

True

False
AEDS AND MOOD SYMPTOMS

- Psychiatric SE occur with AEDs
  - Topiramate - memory problems
  - Phenobarbital - depression and associated with SI
  - Keppra - irritability
- Symptoms and medication timeline is important
  - When possible discuss switching to Depakote, Lamictal, Tegretol

SUMMARY OF ASSESSMENT

• Safety
• Characterize the symptoms and seizure history well
• AEDS
• Psychotherapy
• Pharmacotherapy