

Behavioral Problems and Epilepsy

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- No financial support from pharmaceutical companies
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 - Recent Literature
 - Clinical and Research experience

Behavioral Problems and Epilepsy

- Behavior refers to a persons' observable actions and reactions.
- When words fail us, we use behaviors to express ourselves, either consciously or unconsciously.
- May be as simple as not taking prescribed antiepileptic medication to deny reality of having epilepsy.
- Can be as complicated as post-ictal hallucinations compelling violent acts

Behavioral Problems and Epilepsy

- Behavioral problems may suggest underlying emotional distress.
- Children and Adolescents are more likely to use behavior to express emotional distress than adults
- Understanding behavior and the underlying emotions can aid improvement of behavior.

Behavioral Problems and Epilepsy

- Behaviors and emotions can be clustered into diagnostic categories to facilitate treatment:
 - Mental retardation
 - Autism
 - Attention-Deficit/Hyperactivity Disorder (ADHD)
 - Depression
 - Anxiety
 - Psychotic Disorders

Behavioral Problems and Epilepsy

- Of these disorders, Depression is the most under-recognized and most important to treat in both children and adults.

Depression but not seizure frequency predicts quality of life in treatment-resistant epilepsy

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Abstract—Background: The two-thirds of patients with epilepsy who become seizure-free have a quality of life (QOL) similar to the general population. The major treatment challenge is patients with refractory epilepsy. Whereas neurologists typically focus on seizure reduction in the treatment of these patients, results of studies relating seizure frequency to QOL are conflicting. As depression is associated with reduced QOL in epilepsy and antiepileptic medications (AEDs) can cause depression, it is important to determine the relative roles of depression and seizure frequency in QOL in refractory epilepsy. **Methods:** Prospective evaluation was conducted of patients with refractory epilepsy being admitted to an inpatient video-EEG monitoring unit. The impact of clinical variables (age, sex, marital status, seizure frequency, duration and type of seizure disorder, seizure localization, number of AEDs, depression) on QOL was analyzed. **Results:** Depression was a powerful predictor of QOL ($n = 122$, $\beta = -35.8$, $p < 0.0001$). No other variable predicted QOL. Depression was common (54%), severe (19% with suicidal thoughts), underdiagnosed (37%), and largely untreated (17% on antidepressants). **Conclusions:** Treatment of depression may be inadequately prioritized in the management of intractable epilepsy.

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Epilepsy and Quality of Life

- If seizure free, people with epilepsy enjoy a quality of life similar to the general population.
- One third of people with epilepsy continue to have seizures despite treatment.
- Because people with recurring seizures may have lower quality of life, reduction of seizure frequency is often the dominant focus of care.

Possible Consequences of Epilepsy

- May be unable to legally drive
- May have memory problems or cognitive issues
- May be exposed to stigma or feel embarrassment
- May have restricted independence
- Medication dependence
- Employment problems

These quality of life issues are important!

The study examined potential predictors of quality of life among people with treatment refractory epilepsy

- Age
- Gender
- Marital Status
- Seizure frequency
- Epilepsy type
- Seizure laterality – right, left, or both
- Duration of epilepsy
- Age at time of first unprovoked seizure
- Number of Anti-Epileptic Drugs
- Previous diagnosis of depression
- Current antidepressant use

Cohort Characteristics

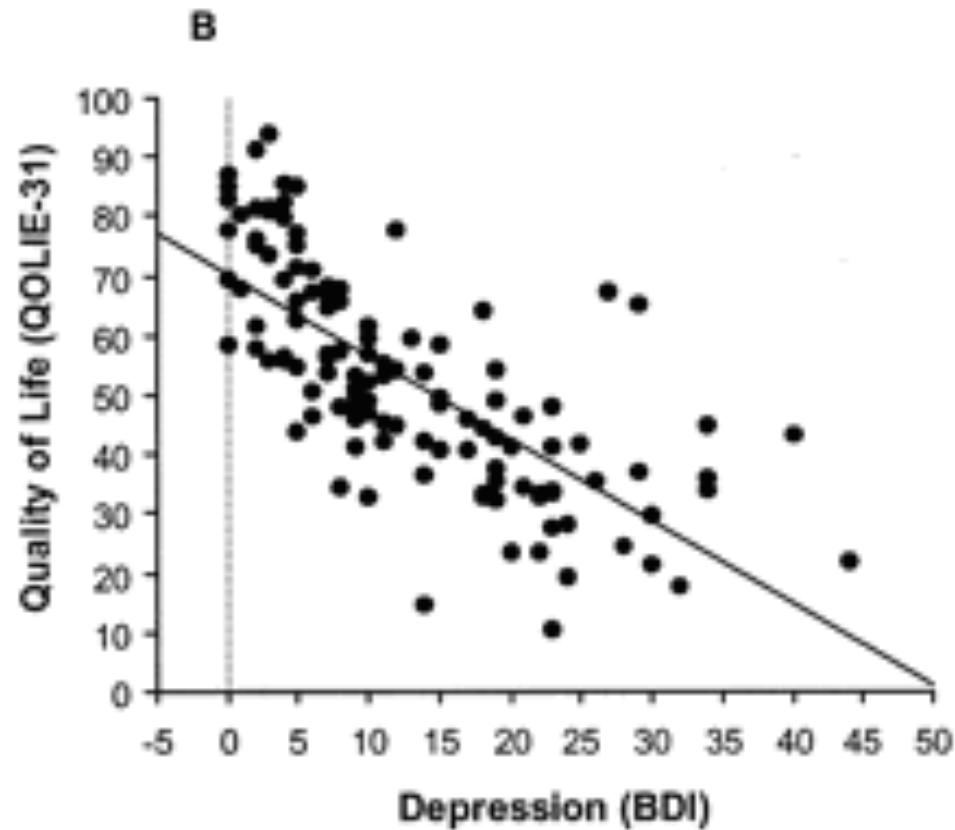
- 29% had a prior diagnosis of depression
- 15 % were on antidepressant medications
- Beck Depression Index Scores:

Not Depressed	46%
Mild-moderate depression	24%
Moderate-severe depression	23%
Severe depression:	7%

Results

- Presence and severity of depression was the only variable that affected the perceived quality of life.
- While 29% were previously depressed, 54% were currently depressed and only 15% were receiving antidepressant treatment.

Regression plot of quality of life vs. depression



Since the Study

- Later studies showed seizure severity was a predictor of quality of life.
- Later studies also showed seizure frequency could also be a predictor of quality of life
- The finding that Depression as a predictor of quality of life in people with epilepsy has been replicated.

Epilepsy and Depression

- Don't assume depressed mood is normal in epilepsy
- Depressive symptoms can be part of a complex partial seizure (Devinsky and Bear, 1990)
- Depressive symptoms can also be pre-ictal or post-ictal.

Epilepsy and Depression

- Untreated depression is associated with more difficulty achieving seizure freedom (Hitiris et al, 2007, Kanner et al 2006)
- Bidirectional relationship between depression and epilepsy.
- Identifying and treating depression improves quality of life in people with epilepsy.

Consensus statement: The evaluation and treatment of people with epilepsy and affective disorders

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ABSTRACT

Affective disorders in people with epilepsy (PWE) have become increasingly recognized as a primary factor in the morbidity and mortality of epilepsy. To improve the recognition and treatment of affective disorders in PWE, an expert panel comprising members from the Epilepsy Foundation's Mood Disorders Initiative have composed a Consensus Statement. This document focuses on depressive disorders in particular and reviews the appearance and treatment of the disorder in children, adolescents, and adults. Idiopathic aspects of the appearance of depression in this population, along with physiological and cognitive issues and barriers to treatment, are reviewed. Finally, a suggested approach to the diagnosis of affective disorders in PWE is presented in detail. This includes the use of psychometric tools for diagnosis and a stepwise algorithmic approach to treatment. Recommendations are based on the general depression literature as well as epilepsy-specific studies. It is hoped that this document will improve the overall detection and subsequent treatment of affective illnesses in PWE.

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Feeling sad sometimes is normal

- Feeling sad, “blue,” or “down” is part of our normal human experience
- Appropriate when we experience tragedy, loss, or receive bad news
- When these feelings persist for more than **2 weeks** and also interfere with daily functioning, then we think about “Major Depression”

Criteria for Major Depression

Over a **2 week** period, for most of the day, nearly every day:

A. Depressed/sad mood

OR

B. Markedly diminished interest/pleasure

AND...

Criteria for Major Depression

4 or more of the following nearly every day:

- Significant change in appetite or weight
- Trouble falling asleep, staying asleep, waking early/late
- Observable slowness of thought and movement
- Fatigue or loss of energy
- Feelings of worthlessness or excessive guilt
- Difficulty thinking or concentrating
- Recurring thoughts of death or suicide

Feeling down vs. Major Depression

- Nearly all of the symptoms outlined for Major Depression can be normal
- BUT... it's not normal to experience 5 of the 9 possible symptoms together persistently over 2 weeks

Children and Adolescents

- Depression may present with different symptoms than in adults:
 - Irritable mood
 - Disruptive behavior
 - Negative thoughts about themselves
 - Decline in academic performance
 - Agitation
 - Intense worry or phobias
 - Regressive behaviors, including separation anxiety

Major Depression

- Major Depression is **NOT just a reaction** to having Epilepsy
- Major Depression cannot be willed or wished away
- When left untreated, is associated with worse outcomes

What causes Depression in Epilepsy?

- Psychological factors:
 - difficulty coping with stressors, such as recurrent seizures
 - real or perceived losses
 - life experiences that set the stage for later depression
- Biological factors:
 - prior history of mental illness
 - family history of mental illness
 - some seizure types
- Social factors:
 - social isolation
 - financial issues
 - limits on independence

Barriers in treating Depression

- People do not recognize or believe they are depressed.
- People think current mood problems are related to a temporary situation.
- People do not want to consider taking another medicine.
- Concern about worsening seizures with antidepressant medication.
- Concern about side effects.
- Stigma.

Treatment for Depression

- Talk therapy: the first line of treatment
 - Individual therapy
 - Group therapy
 - Family therapy
 - Support groups
 - Caregiver support
- Traditional Psychiatric Medications
 - First line Selective Serotonin Reuptake Inhibitors (SSRI's):
 - Lexapro, Celexa, Paxil, Zoloft, Prozac
 - Non-SSRI's:
 - Pristiq, Cymbalta, Effexor, Wellbutrin, Remeron
 - Monoamine Oxidase Inhibitors (Emsam Patch)

Alternative treatments for Depression

- SAM-e (s-adenosyl methionine)
 - over the counter dietary supplement
 - commonly used in Europe for treatment of depression
- Exercise
- Meditation
- Light therapy
- VNS (vagal nerve stimulation) – limited to depression unresponsive to other treatment
- Epilepsy must be optimally treated with goal of seizure freedom

STAR*D: Efficacy of Treatment for Depression

- Sequenced Treatment Alternatives to Relieve Depression
- Nationwide public health clinical trial funded by the NIH
- **NOT** funded by pharmaceutical companies!
- Largest and longest study to evaluate depression treatment
- Randomized, Double blinded study
- 2,876 participants, ages 18-75 in “Level 1”
- Fewer participants in subsequent levels by design
- Standardized rating system and treatment

STAR D* Study Design

Level 1: Celexa (an SSRI) for 12-14 weeks

- a. Symptom free -> 12 month follow-up
- b. Symptoms persist or intolerable side effects -> Level 2

Level 2: **Participant** given option of switching to Talk therapy, a different medication or adding talk therapy or a new medication

- a. Symptom free -> 12 month follow-up
- b. Symptoms persist or intolerable side effects -> Level 3

Level 3: **Participant** given option of switching or adding different medication

- a. Symptom free -> 12 month follow-up
- b. Symptoms persist or intolerable side effects -> Level 4

Level 4: All medications discontinued.

Randomly switched to 4th line medication

STAR D* Results

Level 1: 25% of participants in remission

Level 2: additional 25% in remission

Level 3: additional 15% in remission

Level 4: additional 10% in remission

STAR D* Conclusions

- No treatment was clearly better than another
- 50% of participants had remission after 2 treatments
- 75% of participants had remission after 4 treatments
- Depression is treatable
- May need to try more than one treatment for remission