FROM DESPAIR TO REPAIR: PYRIDOXINE'S PROMISE IN KEPPRA-INDUCED SI

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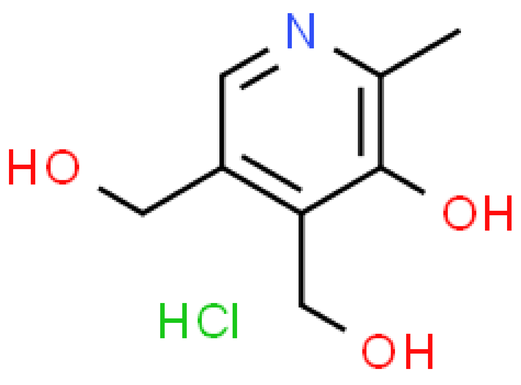
INTRODUCTION

Keppra (generic levetiracetam (LEV)) is a well-established treatment for epilepsy, but it is associated with neuropsychiatric adverse events, including irritability (9.9%), aggression (2.6%), and anger (2.5%).[1,2]

Understanding which patients are more susceptible to these adverse effects is crucial, especially for those with a *history of traumatic brain injury, severe psychiatric illness, or substance use disorder.*[3]

Recent research has explored the use of *pyridoxine* in mitigating these behavioral symptoms in LEV-treated patients, particularly irritability.



CASE DESCRIPTION

Patient Overview:
- A 21-year-old male college student
- Known diagnosis of right temporal lobe epilepsy
- Initially presented with symptoms of persistent depressive disorder

Medical History:
- Epilepsy diagnosed at age 10
- Treated with various AED, including valproic acid & lamotrigine
- Changes in AED due to side effects
- Completed a 5-year treatment course with topiramate.
- Patient was symptom-free at age 21

Current Presentation:
- Presented with left arm twitching
- EEG: mild epileptiform activity in right temporal lobe
- Restarted on topiramate

Onset of Depressive Symptoms:
- Included anhedonia, decreased concentration, energy, & passive SI
- Decline in academic performance

Initial Treatment:
- Started on fluoxetine & CBT
- Significant improvement

Medication Change:
- Switched from topiramate to LEV due to a left non-obstructing ureteral stone

Psychiatric Symptoms with LEV:
- Experienced worsening speech fluency & mood symptoms upon initiating LEV
- Improvement observed after adding pyridoxine

LEV Dosage Adjustments:
- Required increased dosages of LEV
- Resulted in worsening persistent depressive disorder symptoms

Suicide Attempt:
- Following the dosage adjustment, the patient had planned a suicide attempt
- Stopped just before executing the plan

Challenges in Medication Switch:
- Switching AED was not possible due to refusal & prior side effects
- Continued focused CBT follow-ups

Change in Antidepressant:
- Fluoxetine was switched to vortioxetine
- He had significant improvements

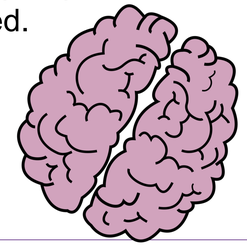
One-Year Follow-Up:
- No LEV dose adjustments
- Resolution of persistent depressive disorder symptoms reported

DISCUSSION

This case illustrates the efficacy of pyridoxine for the management of LEV-induced suicidal ideations and worsening depression.

The identification of patients who are at higher risk of developing behavioral side effects from LEV, particularly suicidal ideations, is critical for prevention and starting appropriate therapy with pyridoxine.

Additional well-designed prospective trials are needed.



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