

# Background

- Acute Intermittent Porphyria (AIP) associated anxiety is described in the literature in both acute and chronic phases of the illness.<sup>1</sup>
- It is challenging to treat given many psychotropic medications are associated with AIP flare-ups.<sup>2</sup>
- We present the first ever case we can find in the literature using gabapentin to treat anxiety in a patient with AIP during both phases of her illness.

# Case Details

- 40-year female with a history of AIP, GAD and MDD who presented to the hospital for an AIP flareup with abdominal pain, nausea and poor oral intake.
- Psychiatric symptoms were acute and chronic anxiety. Initial GAD-7 score in hospital was 18. No other psychotropic medicines were prescribed.
- Previous failures on trials of SSRIs, SNRIs, bupropion and buspirone. Treatment is complicated as many psychotropics are contra-indicated in AIP as they will induce or worsen flare-ups.<sup>2</sup>
- Gabapentin 100 mg TID was prescribed in the hospital with rapid improvement in anxiety. Patient discharged on gabapentin 200 mg TID.
- At 14 weeks follow up the patient's GAD-7 score was reduced to 11 with reported reduced impairment in overall functionality related to anxiety. There were no other psychotropic medications prescribed or psychotherapy employed during this period.

# Gabapentin for the Treatment of Anxiety in a Patient with Acute Intermittent Porphyria

# Robert Olson DO, MBA; Karen Raymond PhD, LCMHC; Sahil Munjal, MD

Department of Psychiatry and Behavioral Medicine, Wake Forest Baptist Medical Center, Winston Salem, NC

## Timeline

Patient Presentation

Gabapentin 100 mg TID started with improvement after 2 days. Titrated gabapentin to 200 mg TID at discharge.

Week 2-14 Outpatient Phase

mg qhs.

At 14 weeks, patient improvement.





Very likely to be safe for prolonged use by individuals with AIP, based on consistent evidence

- aminolevulinic acid (ALA).
- gabapentin for this patient.
- control.<sup>2</sup>

2. Drug Safety Database Search. American Porphyria Foundation(2021) Retrieved April 1 2021 from: https://porphyriafoundation.org/drugdatabase/drug-safety-databasesearch/

3. Duque-Serrano L, Patarroyo-Rodriguez L, Gotlib D, Molano-Eslava JC. Psychiatric Aspects of Acute Porphyria: A Comprehensive Review. Current Psychiatry Reports. 2018Feb2;20(5).



### Discussion

AIP is characterized by a deficiency in the enzyme porphobilinogen deaminase resulting in improper heme production and accumulation of 5-

Subsequent neuronal damage by ALA can lead to a hypo-GABAergic state with 50% reduction in GABAergic synaptic sites reported in rats.<sup>3</sup>

Thus, psychotropics that increase GABA levels may be helpful in treating anxiety, prompting us to choose

Gabapentin is also considered safe in AIP patients, compared to certain benzodiazepines, along with its additional benefits for pain management and seizure

# Conclusion

It is important for C-L psychiatrists to be aware of AIP related toxic effects on the GABA receptors in the brain as well as limitations of using certain psychotropics associated with AIP disease flare-ups.

This case presents a novel treatment for anxiety related to acute AIP flare ups and chronic AIP.

## References

Millward L, Kelly P, King A, Peters T. Anxiety and depression in the acute porphyrias. Journal of Inherited Metabolic Disease. 2005;28(6):1099-1107.