High-Dose Armodafinil in Treatment-Resistant Bipolar Depression: A Case Report

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BACKGROUND

- Bipolar disorder is a severe and disabling chronic disease.
- While much attention has been paid to the treatment of the manic/hypomanic phases of bipolar disorder, bipolar depression consumes a larger portion of patients’ lives and is less amenable to treatment.
- Growing interest has led to five drugs FDA-approved to treat bipolar depression:
  - Modafinil: isolated R-enantiomer of armodafinil.
  - Armodafinil: stimulant-like medication FDA-approved for narcolepsy, obstructive sleep apnea, and shift-work sleep disorder. Thought to act on several neurotransmitters including dopamine, norepinephrine, serotonin, orexin and more.

CASE REPORT

- Pt: A 65 year old white female struggling with treatment-resistant bipolar depression since age 38.

  History of Present Illness

  - Depression symptoms: Anhedonia, low mood, guilt, increased sleep, decreased concentration, psychomotor retardation.
  - Low suicidality
  - Hypomanic symptoms: rapid speech, irritability, tautness
  - No manic episodes
  - Unable to work
  - Comorbid anxiety

  Family History

  - Strong family history of depression
  - Both parents
  - Mother completed suicide
  - Sibling with bipolar disorder

  Medication History

  - Fluoxetine produced 6-month remission, then relapsed. Continued taking fluoxetine after.
  - Trialed many other medications, no response.

Antidepressants

- Citalopram
- Fluoxetine
- Sertraline
- Paroxetine
- Duloxetine
- Venlafaxine
- Tranylcypromine
- Mirtazapine
- Trazodone
- Bupropion
- Vilazodone
- Ketamine
- Mood stabilizers
- Valproic acid
- Lithium
- Lamotrigine

Armodafinil

- In 2016, an out-of-state psychiatrist prescribed her 250mg of armodafinil as adjunctive treatment, along with fluoxetine 40mg/day.
- Patient showed improvement.
- Drug was progressively titrated up to 500mg, 750 mg, and finally 1000 mg.
- Full remission of chronic depression
- Stable at current dose.
- Patient able to function, have a social life, began taking interest in new hobbies.

Medication adherence

- Drug was progressively titrated up to 500mg, 750 mg, and finally 1000 mg.
- Full remission of chronic depression
- Stable at current dose.
- Patient able to function, have a social life, began taking interest in new hobbies.
- In fall 2021, patient caught COVID-19 and began to have “Long Haul Covid” symptoms, including neurological symptoms, fatigue, progressive weakness.
- However, patient states armodafinil is alleviating most of her depressive symptoms, even in this situation.

CONCLUSION & DISCUSSION

- Adjunctive armodafinil is an innovative, currently off-label option for bipolar depression.
- This patient had persistent bipolar depression despite three courses of ECT, numerous TMS sessions, a trial of intravenous ketamine, and numerous trials of other medications, including two of the five FDA-approved options.
- Patient has not trialed the three more recent FDA-approved medications. However, given that she was stable on armodafinil, we felt it best to continue her current efficacious treatment.
- Tolerance is a potential cause for concern. This patient has been stable at 1000mg for three years without increases.
- Given that armodafinil and modafinil are stimulant-like, there is concern these drugs may induce manic symptoms. However, it has mania/hypomania and suicidal ideation have been shown to be low in randomized controlled trials in comparison to placebo. 6
- Higher dosages of armodafinil should be considered for patients with treatment-resistant bipolar depression. It is possible at a higher dose a randomized controlled trial would show improved benefit.

Acknowledgements

Thank you to the patient who consented to have her case report published, in hopes that it would benefit others with bipolar depression.

References


Contact kwok@ucmail.edu with any questions!