

## Background

- ❖ Neurocognitive disorder with Lewy Bodies (NLB) is one of the most common forms of neurocognitive disorder diagnosed in the US affecting up to 5% of the elderly population.<sup>1</sup>
- ❖ There is a paucity of effective treatments for the disease, particularly for the psychiatric sequelae of the disease.
- ❖ There are even fewer reports of Mania secondary to probable NLB with successful treatment.<sup>2</sup>

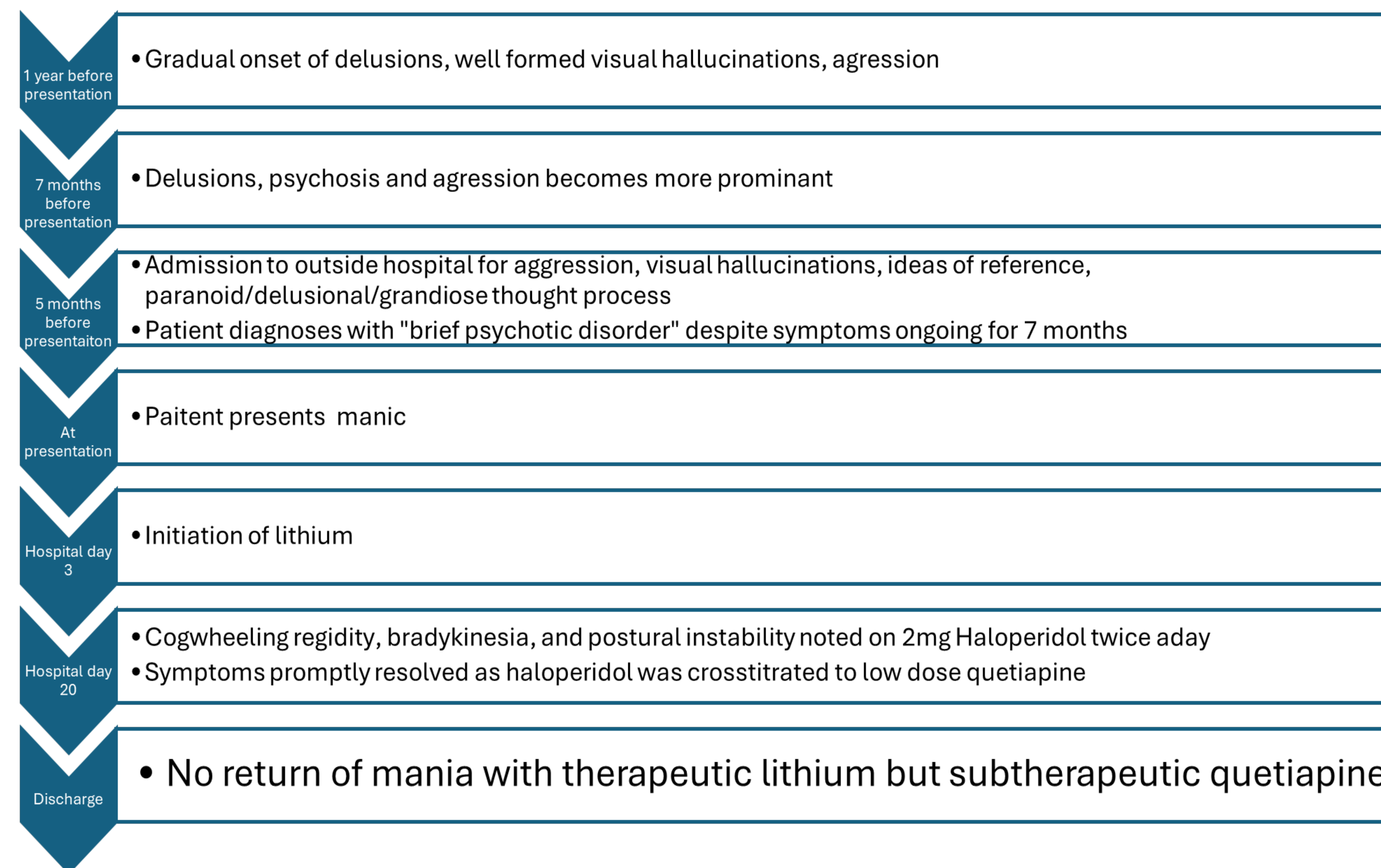
## History

Patient was a 62 year old female with no remote psychiatric history of mania or bipolar disorder who presented to the emergency department for agitation and aggression in the setting of psychosis, paranoia, and cognitive decline that began and gradually progressed over the past two years. On interview, she described a history of well formed, detailed visual hallucinations such as seeing strangers in her yard and sitting at a dinner table with Donald Trump, a need for only 3-4 hours of sleep per night, along with multiple delusions including vast wealth, travel to Mars, persecution from celebrities, and neighbors stealing from her.

## Clinical Findings

- ❖ Physical exam revealed no abnormal movements.
- ❖ Mental status exam: Pressured speech, flight of ideas, grandiosity, delusions, and paranoia.
- ❖ Montreal Cognitive Assessment fluctuated between 13 and 17 with notable declines in the visuospatial/executive, memory, and delayed recall domains

## Timeline and Therapeutic interventions



## Diagnosis

Patient satisfied the following highlighted criteria from DSM-5-TR<sup>3</sup>

### Major or Mild Neurocognitive Disorder With Lewy Bodies

#### Diagnostic Criteria

- The criteria are met for major or mild neurocognitive disorder.
- The disorder has an insidious onset and gradual progression.
- The disorder meets a combination of core diagnostic features and suggestive diagnostic features for either probable or possible neurocognitive disorder with Lewy bodies.

**For probable major or mild neurocognitive disorder with Lewy bodies**, the individual has two core features, or one suggestive feature with one or more core features. For **possible major or mild neurocognitive disorder with Lewy bodies**, the individual has only one core feature, or one or more suggestive features.

- Core diagnostic features:**
  - Fluctuating cognition with pronounced variations in attention and alertness.
  - Recurrent visual hallucinations that are well formed and detailed.
  - Spontaneous features of parkinsonism, with onset subsequent to the development of cognitive decline.
- Suggestive diagnostic features:**
  - Meets criteria for rapid eye movement sleep behavior disorder.
  - Severe neuroleptic sensitivity.
- The disturbance is not better explained by cerebrovascular disease, another neurodegenerative disease, the effects of a substance, or another mental, neurological, or systemic disorder.

## DISCUSSION

- ❖ We believe this is the first documented successful treatment of Mania secondary to NLB with lithium.
- ❖ There is strong evidence that lithium is neuroprotective & associated with lower rates of dementia when used in patients with bipolar disorder possibly due to effects on IP3, pGSK3 $\beta$ , BDNF, VEGF, and autophagy.<sup>4</sup>
- ❖ Emerging evidence is pointing that lithium may also be beneficial in patients suffering from mild neurocognitive impairment who are not suffering from affective disorders.<sup>5</sup>
- ❖ Lithium may be uniquely beneficial in alpha-synucleinopathies as lithium has been found to decrease the formation and increase the clearance of alpha-synuclein in dopaminergic mice neurons.<sup>6</sup>
- ❖ Current treatments for psychiatric manifestations of NLB are poorly efficacious with significant side effects.<sup>7</sup>
- ❖ To maximize therapeutic benefit and limit side effects, we propose that clinicians attempt treatment of psychiatric manifestations of NLB with lithium in the appropriate clinical context.

## REFERENCES

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