

# Catatonia and Psychosis Associated with Hyperthyroidism



## Background

- Hyperthyroidism can result in a variety of physical and neuropsychiatric symptoms ranging from anxiety or depression to mania and psychosis.
- Rarer manifestation is catatonia. Only four prior reported cases in literature.
- We present a case of catatonia and psychosis resulting from hyperthyroidism.

## Case Details

- 37-year-old female with history of hyperthyroidism presented to hospital due to psychosis.
- No psychiatric history other than hallucinations in the context of hyperthyroidism one month prior that resolved with methimazole. Not compliant with methimazole following this initial episode.
- Labs including TSH, free T4, and total T3 collected. Results in table below. Psychosis persisted with methimazole treatment. Psychiatry consulted on hospital day 4.

	TSH (0.35-4.50ng.dL)	Free T4 (0.6-1.4ng/dL)	Total T3 (62-194ng/dL)
Day prior to admission	<0.010	2.75 ng/dL	----
Day 3	----	2.9 ng/dL	248 ng/dL
Day 7	----	1.7 ng/dL	70 ng/dL
Day 16	----	0.7 ng/dL	132 ng/dL

## Timeline

Day 4  
Through  
Day 6

- Despite normalized thyroid hormones, psychosis continued
- Bush Francis Catatonia Rating Scale 14. Positive lorazepam challenge.
- Ativan 1mg QID IV initiated.

Day 7  
Through  
Day 14

- Lorazepam titrated to daily dose of 12mg by day 12 with resultant decrease of BFCs to 1.
- Olanzapine 5mg for psychosis. Increased to 10mg on day 14.
- Continued methimazole per endocrinology.
- Reported SI and psychotic symptoms ongoing so admitted to inpatient psychiatric unit on day 14.

Day 15  
Through  
Day 22

- Olanzapine 10mg continued for psychotic symptoms.
- Fluoxetine 20mg daily started due to depression and suicidal thoughts.
- Lorazepam tapered to 2mg PO TID
- BFCs score of 0 on day of discharge, denied suicidal ideation, and no psychotic symptoms noted or endorsed.

## Discussion

- Catatonia associated with hyperthyroid state previously reported but rare.<sup>1</sup>
- Reports of psychosis or worsening psychiatric symptoms in thyrotoxicosis previously reported.<sup>2</sup> No prior psychiatric history in our case.
- Case demonstrates persistence of psychosis and catatonia beyond stabilization of thyroid hormones. This is consistent with prior case report.<sup>3</sup>
- Limited data on long-term recurrence of psychiatric symptoms.

## Conclusion

- This case highlights psychiatric manifestations of hyperthyroidism including catatonia and psychosis.
- Important for C/L psychiatrists to be mindful of the treatment considerations and clinical course in these cases.

## References

1. Rogers J.P., Pollak T.A., Blackman G., David A.S. Catatonia and the immune system: a review. *Lancet Psychiatry*. 2019;6:620–630.
2. Urias-Urbe L, Valdez-Solis E, Gonzalez-Milan C, Ramirez-Renteria C, Ferreira-Hermosillo A. Psychosis crisis associated with thyrotoxicosis due to Graves' disease. *Case Rep Psychiatry*. 2017
3. Iskandar M, Stepanova E, Francis A. Two cases of catatonia with thyroid dysfunction. *Psychosomatics*. 2014;55:703–70