Clinical Manifestation of Catatonia in a Pediatric Patient with 22q11.2 Deletion Syndrome and COVID-19: A Case Report

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Background

22q11.2 deletion syndrome (22q11.2DS) – otherwise known as DiGeorge Syndrome – is characterized by an increased risk of neuropsychiatric disorders, including primary psychiatric illnesses and catatonia. Catatonia, characterized by various psychomotor disturbances, is a rare and poorly understood condition. On literature review, there have been only 5 case reports and 1 case series with 13 subjects describing the catatonic presentation in 22q11.2 (Rogers et al., 2019). Given the paucity of reports on the clinical manifestations, assessment, and management of catatonia in 22q11.2, we hope this case report can illuminate the challenges and considerations for treating catatonia in this unique pediatric population.

Purpose

- Describe the clinical course and treatment of catatonia as it manifests in 22q11.2.
- Discuss the challenges and unique considerations of clinical management and prognostication in this context.

Case Description

- Patient is an 11 year old female with a history of 22q11.2DS, ADHD, one-time suicidal ideation, resolving mononucleosis, and COVID-19/Group A Streptococcus positivity.
- She was brought in by her mother to the ED for bizarre behavior and auditory/visual hallucinations concerning for psychosis. Her mother reports she was holding a knife and saying “insects are everywhere”.
- On initial admission, Bush Francis Catatonia Score (BFCS) was 10.
- However, on day 2, BFCS was 17 with notable signs including: immobility, mutism, staring, automatic obedience, Mitgehen, Gegenhalten, and ambitendency.

Interventions and Timeline

Hospital Course From Admission (Day 1) to Discharge (Day 10)

Day 1	• BFCS 10
Day 2	• BFCS 15
Day 3	• BFCS 17
Day 3	• Following Ativan 1 mg PO half hour prior: BFCS 10
Day 4	• Following additional night-time and moring dose of Ativan 1 mg: BFCS 11. Ativan 1 mg begins to be given TID on this day and continued until discharge.
Day 4	• Following afternoon dose of Ativan 1 mg: BFCS 1
Day 5	• BFCS 0
Day 6	• BFCS 0
Day 7	• BFCS 1
Day 8	• BFCS 0
Day 9	• BFCS 0
Day 10	• BFCS 0

Total Ativan Given	22 mg PO
Total Days Inpatient	10 days

Outcomes

- Patient was ultimately discharged after twelve inpatient days.
- Supsequent anti-NMDA encephalitis and autoimmune panels resulting after discharge were all negative.
- Notably, while the patient has not had another documented relapse of catatonia thus far, she was seen in the ED one month after discharge for audio/visual hallucinations and suicidal ideation.
- So far, the patient has not been re-admitted as an inpatient to the Virginia Treatment Center for Children.

Conclusions and Discussion

- First and foremost, her immediate response to benzodiazepine challenges was significant in normalizing her mental status exam and clinical presentation. Same-day differences were noted following trial, and the presence of DiGeorge or COVID19 did not appear to negatively alter the efficacy of this challenge.
- Of course, while the overt catatonia symptoms were adequatetly addressed with treatment, there were still residual visual hallucinations persisting despite multiple typical and atypical antipsychotic treatments.
- As with any pediatric or certain subsection of those with cognitive disabilities populations, drawing lines between active hallucinations (both during waking times as well as hypogognic/hypopompic), active imaginations, and nightmares can present a challenge.
- The nature of her visual hallucinations took the form of common internet “Creepypastas” such as the Rake and Slenderman and characters from popular horror movies, both of which she is a fan of and discussed each at length.
- While the distressing nature of her visual hallucinations warranted inpatient admission, differentiating between the relative contributions of each is hard to determine.
- The intersection of COVID19, DiGeorge, and catatonia and psychosis is an interesting avenue to investigate and treatment of patients with such intersections has not been commonly reported. Notably, she is the youngest recorded patient – and first to be younger than a teenager – in published case reports so far.

Works Cited

Rogers, J. P., Pollak, T. A., Blackman, G., & David, A. S. (2019). Catatonia and the immune system: a review. *The Lancet Psychiatry*, *6*(7), 620-630.

Butcher, N. J., Boot, E., Lang, A. E., Andrade, D., Vorstman, J., McDonald-McGinn, D., & Bassett, A. S. (2018). Neuropsychiatric expression and catatonia in 22q11. 2 deletion syndrome: an overview and case series. *American Journal of Medical Genetics Part A*, *176*(10), 2146-2159.