The Use of Physical Exam in Assessment for Catatonia: Has COVID-19 Impacted Diagnosis Rates?

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OBJECTIVES

1. Quantify prevalence of each symptom of catatonia described in case reports and case series from 1996 to present
2. Quantify proportion of catatonic symptoms that are observed vs obtained on interview vs elicited by physical exam
3. Evaluate changes in diagnosis of catatonia after the start of the COVID-19 pandemic

BACKGROUND

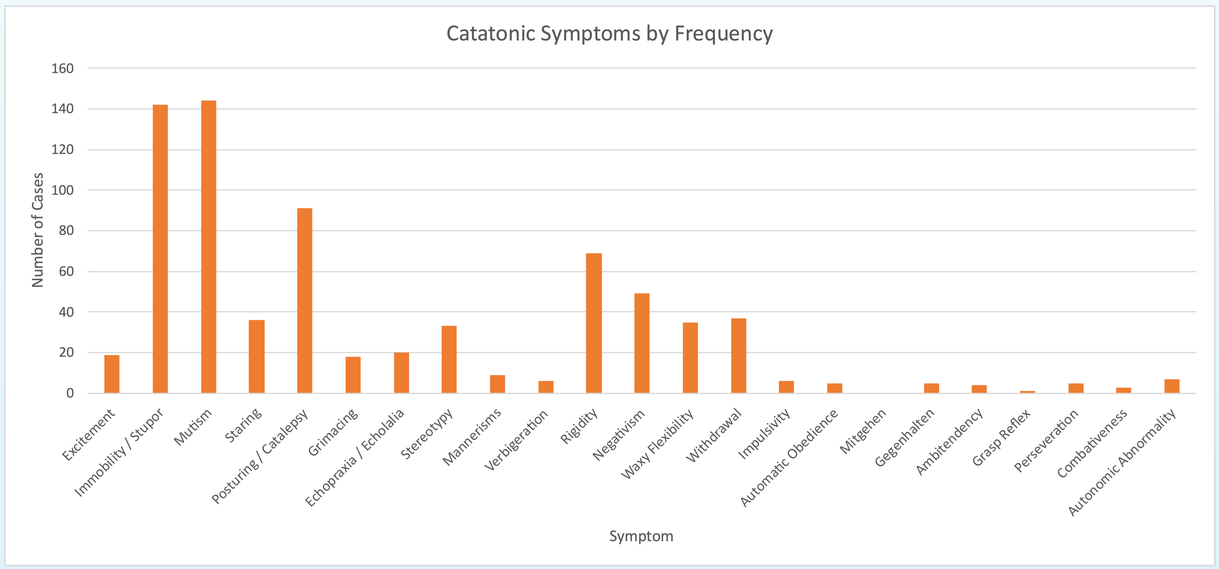
Catatonia is a syndrome of motor function that can occur in the setting of neurodevelopment, psychiatric, and other medical conditions. Psychomotor dysfunction in catatonia can be observed, assessed through interview, or elicited through physical examination. The 23-item Bush-Francis Catatonia Rating Scale and accompanying standardized examination for catatonia is widely used for the diagnosis and monitoring of catatonic symptoms.[1] Hands-on physical examination of the patient (assessing for rigidity, waxy flexibility, mitgehen, gegenhalten, or grasp reflex) is included as part of the diagnostic process. During the COVID-19 pandemic, many consultation-liaison psychiatry practices have shifted towards telehealth (including within the hospital setting) in an effort to preserve personal protective equipment (PPE) and halt transmission of disease. As a result, diagnosis of catatonia may have shifted away from reliance on physical exam findings and towards other observed symptoms of catatonia. Here, we utilize literature review to observe patterns of symptom reporting in catatonia.

METHOD

- Conducted literature review of catatonia case reports or case series on PubMed, Medline, and psycINFO, from 1996-2021.
- Compiled data for each symptom of catatonia to assess frequency of observed symptoms, symptoms able to be assessed on interview, and symptoms that can only be elicited on physical exam.
- Isolated case reports published June 2020 – May 2021, to capture data from March 2020 – Feb 2020 (peak of COVID), to determine whether there were fewer reported cases during this period.

RESULTS

- The most commonly reported symptoms were mutism (19.4%, z=20.1), immobility/stupor (19.1%, z=19.7), posturing/catalepsy (12.2%, z=10.5), and rigidity (9.3%, z=6.6). Chi^2=88.2, $p < 0.0001$.
- Physical exam symptoms were reported less frequently (14.8% of cases) compared to observed (55.1%) and interviewed symptoms (30.1%). Chi^2=115.19, $p < 0.0001$.
- Physical exam symptoms occurred less frequently than expected (14.8% vs 21.7%) based on number of criteria. Chi^2=21.34, $p < 0.0001$.
- There was no decrease in case reports in June 2020 – May 2021. Case reports during COVID made up 8.9% of reports in the last 25 years, and 15.9% of reports in the last 10 years. Chi^2=13.56, $p = 0.0002$.



DISCUSSION

It is unlikely that infection control measures or virtual evaluations affected rates of diagnosis of catatonia, based on the following findings:

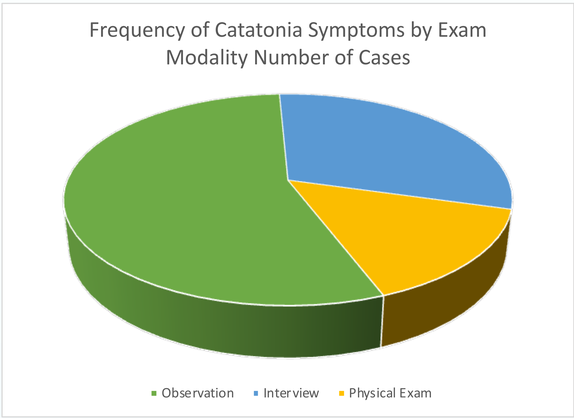
- Based on case report data, the most common symptoms of catatonia are observed or able to be obtained on interview.
- Physical exam symptoms are reported less frequently, even when taking into account that there are less of these criteria, compared to observed or interviewed symptoms.
- When comparing the number of case reports during COVID to previous years, there was no decrease in the number of catatonia cases reported.

Potential limiting factors include:

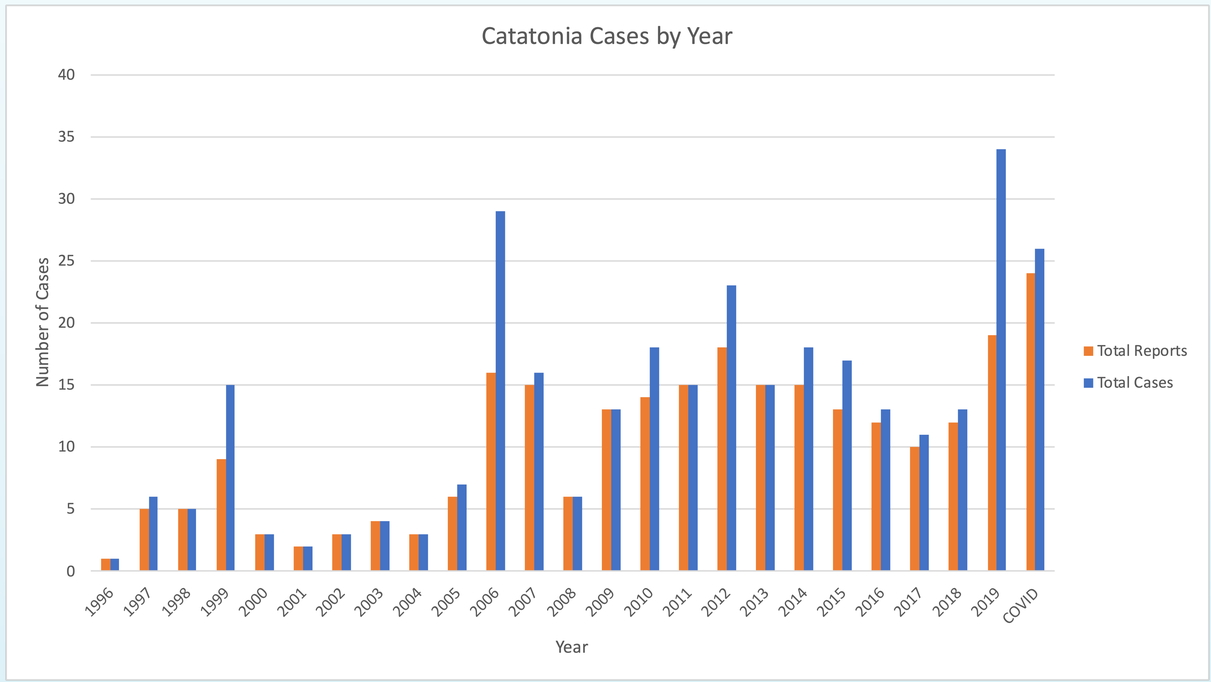
- Three of the five physical exam symptoms (mitgehen, gegenhalten, grasp reflex) are severity symptoms, rather than screening symptoms, and it is also possible that clinicians are less familiar with how to recognize or elicit these symptoms.
- To be truly precise, "posturing" and "catalepsy" should be split into observed and physical exam categories, respectively, and this analysis included them both within observed symptoms. However, "catalepsy" only made up a small fraction of this category, and this difference is unlikely to have significant impact on outcomes as reported here.

REFERENCES

1. Bush G, Fink M, Petrides G, Dowling F, Francis A. Catatonia. I. Rating scale and standardized examination. Acta Psychiatr Scand. 1996;93(2):129–136.



Observation		Interview	Physical exam
Excitement	Withdrawal	Mutism	Rigidity
Immobility/stupor	Impulsivity	Echopraxia/echolalia	Waxy flexibility
Staring	Ambitendency	Verbigeration	Mitgehen
Posturing	Perseveration	Negativism	Gegenhalten
Grimacing	Combativeness	Automatic obedience	Grasp reflex
Stereotypy	Autonomic abnormality		
Mannerisms			



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