

The treatment-resistant catatonia patient

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Ms. R develops severe catatonia after being hospitalized with agitation, delusions, and hallucinations. A benzodiazepine does not help. How would you treat her?

CASE Worsening psychosis

Ms. R, age 21, is admitted to our psychiatric facility while experiencing paranoid delusions and auditory hallucinations. Upon admission, she is agitated and her mood is labile.

Ms. R has 4 previous brief psychiatric admissions and was diagnosed with schizoaffective disorder, bipolar type and moderate mental retardation. Her family history is positive for psychiatric illness, as her mother was diagnosed with schizophrenia. Prior to admission, Ms. R was taking ziprasidone, 160 mg/d, and lithium, 450 mg/d, for 11 months. Both were discontinued during the first week of admission because Ms. R was not responding.

During this admission, the treating psychiatrist assesses Ms. R using the Schedules for Clinicians' Interview in Psychiatry (SCIP), an instrument developed by the lead author (AA) for psychiatrists to use in conjunction with their routine clinical interviews in inpatient and outpatient settings (see *Related Resources*, page 68). The SCIP includes a 25-question screening section and a diagnostic section that consists of 7 modules that represent major psychiatric diagnoses defined by DSM and International Classification of Diseases criteria.¹

During the first week of admission, we moni-

tor Ms. R and administer haloperidol as needed, 10 mg total. Eight days after admission, she develops severe catatonia. On the catatonia scale of the SCIP, Ms. R scores the maximum on measures of immobility, catalepsy/waxy flexibility, and mutism (*Table*).

How would you treat Ms. R's catatonia?

- restart ziprasidone and lithium
- refer her for medical evaluation to rule out organic causes of catatonia
- prescribe a benzodiazepine
- try a different antipsychotic

The authors' observations

DSM-IV-TR recognizes catatonia as a schizophrenia subtype, as a descriptor for mania and major depression, and as being caused by various medical conditions, such as neuroleptic malignant syndrome, encephalopathy, or renal failure.² Kahlbaum initially described catatonia in 1873 as a brain disease characterized by motor abnormalities such as akinesia, rigidity, negativism, mutism, grimacing, posturing, catalepsy, waxy flexibility, and verbigerations.³ Catatonia is characterized by hypo- and hyperkinetic features. Catalepsy, stupor, rigidity, and catatonic posturing with waxy flexibility might alternate with violent catatonic excitement.⁴

Catatonia can be life-threatening; patients might not be able to eat or chew food, which

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Table

Patient's catatonia symptoms: Response to pharmacotherapy

	Lorazepam only	Lorazepam + risperidone	Risperidone oral only	Risperidone long-acting injection only
Dosage(s)	7 mg total over 7 days	Lorazepam: 4 mg/d Risperidone: 4 mg/d	8 mg/d	37.5 mg every 2 weeks
Scores on SCIP catatonia scale:*				
Immobility	2	1	0	0
Catalepsy/waxy flexibility†	2	1	0	0
Mutism	2	0	0	0
Total score	6	2	0	0

*Scale of 0 to 2, with 0=none, 1=less than half the time, and 2=more than half the time. Symptoms are evaluated over a 1-day period
†For this category, 0=none, 1=brief (usually <1 minute) episodes of 'freezing' in a position, and 2=episodes of 'freezing' in a position for >1 minute
SCIP: Schedules for Clinicians' Interview in Psychiatry

puts them at risk for aspiration. Those with immobility might not move to urinate or defecate. During the first half of the 20th century, catatonia was documented in up to 50% of patients with schizophrenia.⁵ Since then, the incidence of catatonia has decreased, possibly the result of advances in psychopharmacology.⁶

Two days after Ms. R develops catatonia, we transfer her to a local hospital for evaluation to rule out a medical cause of her catatonic symptoms.

EVALUATION No medical cause

At the hospital, physical examination, electroencephalography, drug screening, and liver and thyroid function tests are within normal limits, eliminating an organic cause of Ms. R's catatonia. MRI of the head shows a 3-mm mass at the base of the infundibulum, which is unchanged from a prior MRI. Ms. R received 7 mg total of lorazepam over 4 days without relief of her catatonia. She is transferred back to our facility.

What step would you try next?

- switch to a different benzodiazepine
- add risperidone to lorazepam

- add a different antipsychotic to lorazepam
- administer electroconvulsive therapy (ECT)

The authors' observations

Benzodiazepines and ECT are effective treatments for catatonia.⁷ Benzodiazepines are considered first-line treatment because of their efficacy and favorable side-effect profile.⁷ Lorazepam frequently is used to treat catatonia in the short term.⁸ Long-term use of benzodiazepines, however, is associated with tolerance, addiction, and rebound phenomena.^{8,9}

Patients with catatonia who do not respond to benzodiazepines may benefit from ECT.⁹ ECT can cause serious side effects, however, including memory impairment, confusion, delirium, and cardiac arrhythmias.¹⁰

Atypical antipsychotics may alleviate motor symptoms of catatonia by virtue of

Clinical Point

Atypical antipsychotics may alleviate catatonia motor symptoms by virtue of their 5-HT_{2A} receptor antagonistic action

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Clinical Point

We recommend using risperidone to treat catatonia in psychotic patients who do not respond to a benzodiazepine

their 5-HT_{2A} receptor antagonistic action.⁹ In 2 case reports, risperidone successfully treated catatonia.^{4,11} Kopala et al¹¹ found risperidone, 4 mg/d, was effective in treating severe, first-episode catatonic schizophrenia in a neuroleptic-naive young man. This efficacy was sustained over a 3.5-year outpatient follow-up.

In another report, risperidone, 6 mg/d, effectively treated catatonia and prevented further episodes in a patient with schizophrenia who developed severe catatonia after receiving adequate treatment for Lyme disease with encephalitis.⁴ Two relapses of catatonic syndrome occurred when risperidone was reduced to 2 mg/d, and remission occurred after risperidone was increased to 6 mg/d. Risperidone's antagonistic activity of the 5-HT₂/D₂ receptors may be relevant to its anticatatonic effect.¹²

Other atypical antipsychotics—ziprasidone and olanzapine—also have been shown to be effective in treating catatonia. Levy et al¹³ reported successful treatment of a catatonic state (with catalepsy, stupor, and mutism) using intramuscular ziprasidone followed by oral ziprasidone. A data analysis by Martenyi et al¹⁴ showed olanzapine to be effective in treating non-specific signs and symptoms of catatonia, as measured by the Positive and Negative Syndrome Scale.

TREATMENT Trying risperidone

Based on case reports showing risperidone's efficacy for catatonia, we start Ms. R on risperidone, 4 mg/d, and lorazepam, 4 mg/d. Eight

Related Resources

- Schedules for Clinicians' Interview in Psychiatry (SCIP). Available from Ahmed Aboraya, ahmedaboraya@wvdhhr.org.
- Valevski A, Loebl T, Keren T, et al. Response of catatonia to risperidone: two case reports. *Clin Neuropharmacol*. 2001;24(4):228-231.
- Van Den Eede F, Van Hecke J, Van Dalfsen A, et al. The use of atypical antipsychotics in the treatment of catatonia. *Eur Psychiatry*. 2005;20(5-6):422-429.

Drug Brand Names

Haloperidol • Haldol	Risperidone • Risperdal
Lithium • Eskalith, Lithobid	Risperidone long-acting injection • Risperdal Consta
Lorazepam • Ativan	Ziprasidone • Geodon
Olanzapine • Zyprexa	

Disclosure

The authors have no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

days later, her catatonic symptoms decrease substantially—she scores 2/6 on the SCIP catatonia scale (*Table, page 67*)—and she starts to talk with the staff.

We continue this regimen for 30 days, then discontinue lorazepam to avoid long-term side effects—such as dependence—and titrate risperidone to 8 mg/d. Ms. R continues to improve while taking risperidone only. Twenty-three days after stopping lorazepam, she is free of catatonic symptoms, scoring 0/6 on the SCIP catatonia scale.

We discharge Ms. R on risperidone. Because she has a history of medication nonadherence, we prescribe risperidone long-acting injection, 37.5 mg every 2 weeks, while continuing oral risperidone for 3 weeks after the first injection. She does well on this medication, experiencing no catatonic symptoms or adverse effects over the next 15 months as measured by the SCIP assessment.

Bottom Line

Benzodiazepines and electroconvulsive therapy are effective treatments for catatonia but each carries the risk of adverse effects. Case reports suggest risperidone is effective in short- and long-term treatment of catatonia and can be added to benzodiazepines in patients with delusions or hallucinations.

The authors' observations

This is the third case report in the literature to show that risperidone is effective in short- and long-term treatment of catatonia.^{4,11} Although Ms. R's initial response can be attributed at least partially to lorazepam—which is known to be effective in treating catatonia—she continued to show improvement while taking risperidone only and remained free from catatonic symptoms for 15 months, until she was readmitted for reasons unrelated to catatonia.

We recommend using risperidone to treat catatonia in patients who do not respond to a benzodiazepine, especially those with other psychotic symptoms such as delusions or hallucinations. While administering risperidone, watch for long-term side effects, such as hyperlipidemia, weight gain, and diabetes. For catatonia in patients who cannot tolerate risperidone, consider olanzapine or ziprasidone.

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