

Conclusions: Metabolic changes in patients with schizophrenia who receive new antipsychotics in addition to their unfavorable lifestyle (improper diet, lack of physical activity, smoking) can lead to the development of metabolic syndrome and increase the risk for diabetes and cardiovascular diseases. It is therefore necessary to establish protocols for monitoring these risks and preventing comorbidities.

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EPV0929

The Challenge of Lorazepam Failure: Malignant Catatonia Treated Successfully with Valproate

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Introduction: Despite the unclear nature of catatonia, the treatment response of catatonia to benzodiazepines is widely known for its typical, dramatic recovery. The neurobiological correlates of this phenomenon regarding specific receptors and neurotransmitters are unclear, as are the potential treatment options. This is important to consider when the most commonly recommended treatments of catatonia with Lorazepam or Electroconvulsive Therapy (ECT) are unavailable or unsuccessful. In this report, we describe a case of severe, malignant catatonia and psychosis mostly unresponsive to Lorazepam during two different hospitalizations, but with eventual return to baseline after successful treatment with Valproate.

Objectives:

- To describe a unique case of malignant catatonia that was unresponsive to Lorazepam
- To illustrate the potential utility of Valproate as an alternative treatment strategy for catatonia

Methods: This is a case report.

Results: A 19-year-old Hispanic male presented to our hospital initially with family reports of severe and sudden depression with bizarre behavior. Prior to this admission, the patient had been discharged recently from another tertiary hospital following a 2-week admission for severe catatonia. Chart review from that admission scored the patient's Bush-Francis Catatonia Rating Scale (BFCRS) at 16, which remained mostly unchanged after numerous additional intramuscular doses and standing oral doses of Lorazepam, with a reduction of BFCRS the next day of only 2. During the patient's admission at our hospital, the patient endorsed bizarre, guilt-related delusions, and his catatonia was more severe and malignant with a BFCRS of 19, with tachycardia and diaphoresis. The patient was initially given a total of seven doses of a mix of intramuscular and oral Lorazepam (total 18mg), with a minimal 2-point reduction in BFCRS. As ECT was unavailable, Lorazepam was discontinued in favor of a trial of oral Valproate 500mg twice daily, and after his catatonia subsided (with a serum level of 60.8),

he was started on oral Risperidone 0.5mg once at night, titrated up to 3mg twice daily, and eventually returned to baseline as confirmed by his family members.

Conclusions: The treatment of catatonia with Lorazepam is usually reliable and has been found to be up to 80% effective, but when the recommended use of benzodiazepines and ECT fail or are unavailable, there are few studies exploring the viability of alternative treatment options. With the use of Valproate, previous studies have shown it can treat even severe catatonia (Krüger, *J Neuropsychiatry* 2001; 13:303-304), or can actually be its cause (Lauterbach, *Neuropsychiatry, Neuropsychology, and Behavioral Neurology*. 1998 Jul;11(3):157-163). As such, this case report highlights the importance of exploring alternative treatments for catatonia, including Valproate, in order to better tailor the management of this unique syndrome.

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EPV0930

Artificial intelligence and virtual reality applied to the clinical care of women with schizophrenia: A systematic review.

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Introduction: Artificial intelligence (AI) and virtual reality (VR) are useful tools that can improve precision medicine and can prove useful in the clinical care of patients with psychosis.

Objectives: Our aim was to determine whether AI and VR have been applied to the prediction of clinical response in women with schizophrenia.

Methods: A systematic review was carried out in PubMed and Scopus from inception to September 2023 by using the PRISMA guidelines. Search terms: ("artificial intelligence" OR "intelligent support" OR "machine intelligence" OR "machine learning" OR "virtual reality" OR "intelligent agent" OR "neural networks" OR "virtual reality" OR "digital twins") AND ("schizophrenia" OR "psychosis") AND ("women" OR "gender"). Inclusion criteria: 1) English, French, German or Spanish language, 2) reporting treatment response in schizophrenia (as long as information in women was included), and 3) including AI and VR techniques.

Results: From a total of 320 abstracts initially screened (PubMed:182, Scopus:138), we selected 6 studies that met criteria.

- Prediction of treatment response. (1) Clinical information, genetic risk score and proxy methylation score have been shown to improve prediction models. (2) Graph-theory-based measures have been combined with machine learning.
- Therapeutic drug monitoring. (1) A machine learning model has been useful in predicting quetiapine blood concentrations.