

Time to replace the term neuroleptic malignant syndrome with antidopaminergic syndrome?

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Published: May, 2022 • DOI: [https://doi.org/10.1016/S2215-0366\(22\)00108-0](https://doi.org/10.1016/S2215-0366(22)00108-0)

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Neuroleptic malignant syndrome is a potentially fatal reaction to antipsychotic drug treatment, characterised by mental status change, parkinsonism, hyperthermia, and dysautonomia. It is most common with high-potency, first-generation antipsychotic agents but can be caused by all classes of antipsychotic drugs. In a recent systematic review, mortality from neuroleptic malignant syndrome was reported at 7-6%.¹ The pathophysiology is not fully known, but there is a consensus that blockade of dopaminergic signalling or related pathways is fundamental in causing this condition.^{1, 2} This theory is supported by the same symptomatology being found in patients treated with other drugs that might also block dopamine receptors, such as antihistaminergic antiemetics. The same effect is also seen after acute withdrawal of dopaminergic agents in patients with Parkinson's disease.^{2, 3} This is an increasing problem with pump failure in patients with Parkinson's disease treated with continuous subcutaneous or intrajejunal infusions of dopaminergic drugs. However, this patient group is diagnosed with parkinsonism-hyperpyrexia syndrome,³ neuroleptic malignant-like syndrome, acute akinesia, the malignant syndrome in Parkinson's disease, as well as neuroleptic malignant syndrome.⁴ We largely consider these terms to be synonyms for the same condition and advocate the need for a common term, used by clinicians of all specialties to diagnose these patients.

Neuroleptics is a largely outdated synonym for antipsychotic medications. Therefore, it would be favourable to replace the term neuroleptic malignant syndrome, as well as the several terms used for describing the same symptoms in patients with Parkinson's disease, with an updated label that is associated with the symptomatology or pathophysiology of the condition. Although the pathophysiology is not fully explored and probably also involves other neurotransmitter systems, the dopamine pathways appear sufficiently central to use as a basis for a diagnostic term.

Serotonergic syndrome is an important differential diagnosis for this condition, adequately named after the largely drug-induced change in serotonin levels in the CNS. According to this tradition, it would be sensible to establish a pathophysiology-related name to replace neuroleptic malignant syndrome, parkinsonism-hyperpyrexia syndrome, and other synonyms. We therefore propose antidopaminergic syndrome as a new clinical diagnosis for patients with mental status change, parkinsonism, hyperthermia, and dysautonomia caused by dopamine-blocking agents or abrupt cessation of dopaminergic treatment.

We declare no competing interests.

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Article info

Publication history

Published: May 2022

Identification

DOI: [https://doi.org/10.1016/S2215-0366\(22\)00108-0](https://doi.org/10.1016/S2215-0366(22)00108-0)

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