



Quetiapine Antipsychotic is Linked to Sudden Cardiac Death

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A recent publication from the Heart Rhythm Society confirms a significant risk of QT prolongation, ventricular arrhythmia, and sudden cardiac death associated with quetiapine, a second generation antipsychotic also known as the brand name Seroquel.

The authors base their conclusions on a methodical, retrospective study of more than 8,800 patients who had been treated with quetiapine and who had a baseline ECG prior to starting the medication, which was then compared with later ECG readings. The researchers conducted a parallel review for the first generation antipsychotic, haloperidol (brand name Haldol), evaluating data from more than 2,300 patients.

The results: 13% of patients receiving quetiapine therapy developed severe QT prolongation, a serious disruption in electrical conduction in the heart that can trigger arrhythmia. Data further revealed that the QT prolongation was significantly associated with ventricular arrhythmia and with sudden cardiac death, especially for patients treated with quetiapine.

The risk of sudden cardiac death among quetiapine users was highest for those who developed severe QT prolongation (2.3%), but sudden cardiac death also occurred independently among quetiapine users.

Added risk factors for QT prolongation

The analysis from the research team indicates that “a significant number” of patients receiving antipsychotic therapy had additional risk factors for QT prolongation: age (over 65), existing

heart failure, coronary artery disease, diabetes mellitus, hypokalemia, and simultaneous drug regimens.

Topping the list of drug-drug interaction concerns were medications that may cause hypokalemia (e.g., loop diuretics) and drugs that can raise the risk of TdP (a very rapid heart rate in the ventricles). For patients taking quetiapine, two specific drugs were associated with a “significantly higher risk” of severe QT prolongation: the potassium-wasting diuretic furosemide and the heart rhythm medication amiodarone.

The blood potassium issue comes into play as both quetiapine and haloperidol block potassium channels, with an effect on electrical activity in the ventricles. In this study, more than 60% of patients on either antipsychotic developed hypokalemia.

Irrespective of baseline risk factors, the authors found that syncope and seizures were additional adverse effects of the antipsychotic usage. This quantitative study connects the dots, demonstrating that quetiapine can cause severe QT prolongation, leading to ventricular arrhythmias, and sometimes leading to sudden cardiac death.

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The study authors advise clinicians to exert vigilance with any patients on these antipsychotic drugs, monitoring blood potassium levels and ECGs to detect abnormalities.

Adverse outcomes - antipsychotics

While a first generation antipsychotic is typically not a drug of choice in treating BPSD, numerous second generation antipsychotics, a “pharmacologically diverse group,” are associated with a range of adverse outcomes, conclude Rogawska and colleagues in their comprehensive review article, [Implications of Adverse Outcomes Associated with Antipsychotics in Older Patients with Dementia: A 2011–2022 Update](#).

Common findings include cerebrovascular events, pneumonia, gait disturbance, sedation, Parkinsonian symptoms, thromboembolisms, and accelerated cognitive decline. Patients who have [Lewy body dementia](#) or [frontotemporal dementia](#) may be at heightened risk of adverse outcomes related to antipsychotics, the authors add.

Age-related risks

The Heart Rhythm Society paper on severe QT prolongation was not limited to individuals with dementia, and the mean age of patients studied was 68.6. It’s worth considering the additional risks imposed by dementia-related frailty and age-related changes.

Rogawska et al. point to reduced renal and hepatic clearance and other factors that place older patients with dementia at heightened risk for adverse effects from medications.

The American Geriatrics Society, in its [Beers Criteria](#)®, recognizes that certain medications can be potentially inappropriate for older adults. They caution that antipsychotic drugs can lead to an “increased risk of stroke and greater rate of cognitive decline and mortality in persons with dementia”. Antipsychotics are classified as “potentially inappropriate”.

Antipsychotic use doubles mortality risk in dementia

Overall, antipsychotic usage for people with dementia almost doubles the short-term and long-term mortality rate, note Rogawska et al. Additive risks include cardiac medications and other drugs—[polypharmacy](#).

It’s important to remember that most antipsychotics prescribed for patients who have dementia are used off-label. To maintain the highest possible level of safety, dignity, functionality, and quality of life, the GuideStar Eldercare team regards [antipsychotic stewardship](#) as a clinical imperative in dementia care.



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How to reduce use of antipsychotics

[Recent research](#) has demonstrated the value of a neurology-forward approach to help reduce reliance on antipsychotics. The [key ideas in antipsychotic reduction](#) involve framing up the neurological basis of dementia symptoms, ensuring accurate diagnosis, addressing polypharmacy, and implementing gradual dose reduction. Individual clinical evaluation can help set a care plan onto a solid course, and ongoing assessment ensures that dynamic needs are being met.

The findings about quetiapine-related outcomes underscore the urgency of developing evidence-based clinical approaches to dementia care. It's a challenging task. We're here to help.

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