

Potential benefits and adverse events of Clozapine, an important antipsychotic medication

July 31 2020



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The vast majority of reviews on psychotropic drugs is focused on the potential benefits that may have. However, the vulnerabilities induced by

treatment need also to be considered.

The study used Richardson and Doster's model to conduct the risk/benefit evaluation in clinical pharmacology. The model proposes that, in evidence-based medical decision-making for individual patients, three dimensions should be considered:

- baseline risk of poor outcomes from an index disorder that is not treated
- responsiveness to the [treatment option](#)
- vulnerability to adverse drug reactions

In line with this model, this article reviewed the:

- poor life expectancy associated with treatment-resistant schizophrenia (TRS), which may be improved in patients who adhere to clozapine
- findings that clozapine is the best treatment for TRS (according to efficacy, effectiveness and well-being)
- potential for clozapine to cause vulnerabilities, including potentially lethal adverse drug reactions such as agranulocytosis, pneumonia, and myocarditis

Results suggest different recommendations for rational use, specifically:

- modification of the clozapine package insert worldwide to include lower doses for Asians and to avoid the lethality associated with pneumonia
- the use of clozapine levels for personalizing dosing
- the use of slow and personalized titration. This may make clozapine as safe as possible and contribute to increased life expectancy and well-being

In the absence of data on COVID-19 in clozapine patients, clozapine possibly impairs immunological mechanisms and may increase pneumonia risk in infected patients. Psychiatrists should call their clozapine patients and families and explain to them that if the patient develops fever or flu-like symptoms, the psychiatrist should be called and should consider halving the clozapine dose. If the patient is hospitalized with [pneumonia](#), the treating physician needs to assess for symptoms of clozapine intoxication since halving the dose may not be enough for all patients; consider decreasing it to one-third or even stopping it. Once the signs of inflammation and fever have disappeared, the [clozapine](#) dose can be slowly increased to the prior dosage level.

More information: Jose de Leon et al. A Rational Use of Clozapine Based on Adverse Drug Reactions, Pharmacokinetics, and Clinical Pharmacopsychology, *Psychotherapy and Psychosomatics* (2020). [DOI: 10.1159/000507638](#)

Provided by Journal of Psychotherapy and Psychosomatics

Citation: Potential benefits and adverse events of Clozapine, an important antipsychotic medication (2020, July 31) retrieved 3 May 2024 from <https://medicalxpress.com/news/2020-07-potential-benefits-adverse-events-clozapine.html>

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