#146

AN INTERNATIONAL AWARD-WINNING INSTITUTION FOR SUSTAINABILITY

The efficacy and safety of second-generation antipsychotics used in schizophrenia pharmacotherapy: A comparative review

Mohamed Hassan Elnaem

Quality Use of Medicines Research Group, Department of Pharmacy Practice, Kulliyyah of Pharmacy, International Islamic University Malaysia

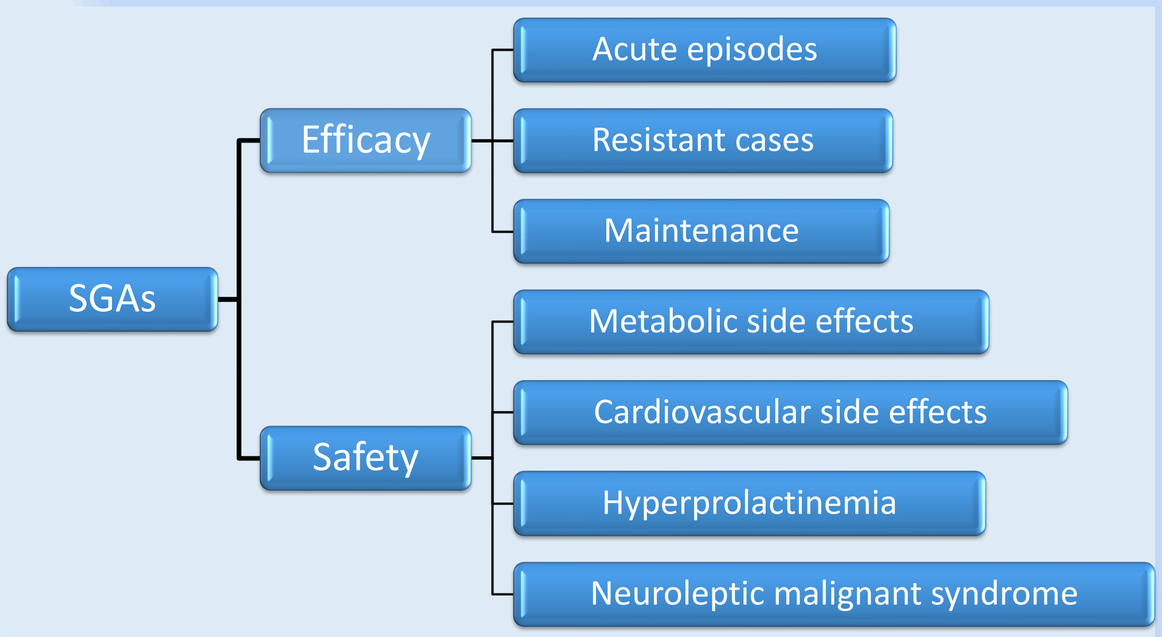
INTRODUCTION

- Antipsychotic medications are widely used to treat schizophrenia because of their demonstrated clinical benefits.
- It is recommended that antipsychotic agents be tailored to the patient's condition to maximise positive outcomes while minimising adverse effects.
- This comparative review was conducted to highlight, summarise, and provide updates on the differences in efficacy and safety in the treatment of schizophrenia between various second-generation antipsychotic drugs (SGAs).

METHODS

- A comparative review was conducted involving the published literature between 2000 till January 2021.
- The search performed through three scientific databases: Google Scholar, Science Direct, and PubMed.
- All English literature that reported comparison between different SGAs in terms of efficacy and/or safety were included.
- We followed a systematic procedure to guide extracting, charting, and synthesising the results.

RESULTS



Clozapine showed efficacy as a treatment for resistant cases. The evidence generated from blinded RCTs is not conclusive.

Paliperidone palmitate showed comparable efficacy and longer relapse time than other SGAs as maintenance treatment.

The likelihood of SGAs causing weight gain and diabetes mellitus were higher in Clozapine and Olanzapine than in other SGAs.

For SGAs-induced NMS, Risperidone had the highest number of cases than other SGAs. Also, it was associated with significant increase in prolactin level.

Ziprasidone showed the highest tendency to cause QT prolongation, while olanzapine was the less likely drug to cause this effect.

It was noted that extent of reporting safety concerns differ according to study designs.

DISCUSSION AND CONCLUSIONS

Lurasidone and olanzapine showed comparable effectiveness for treating acute schizophrenia.

Compared to quetiapine, lurasidone showed greater improvement in PANSS total and positive subscale and lower relapse rate.

Clozapine is considered the gold standard for TRS treatment, but more studies should be conducted since the evidence from blinded RCT is still not conclusive.

Paliperidone palmitate is one of the LAIs which shows efficacy for the acute and maintenance treatment of schizophrenia. It showed greater improvement in PANSS total score and quality of life and longer time to relapse.

Overall, no significant differences in the time to clinical response between several SGAs open the role of clinical judgement and balancing benefits and risks across individual cases.

In the acute phase of schizophrenia, the effectiveness of antipsychotics tended to be dose-dependent, with each antipsychotic having its own dose-response curve

The degree to which antipsychotics dose dependence is associated with adverse effects varies significantly across adverse effect types.

Dose-related adverse effects were reported for parkinsonism, hyperprolactinemia, weight gain, and neurocognitive impairment.

Less evidence of dose-dependent adverse effects with akathisia, tardive dyskinesia, osteoporosis, sexual dysfunction, diabetes mellitus, QT prolongation, and neuroleptic malignant syndrome

Metabolic side effects depend on the type of the prescribed antipsychotic, the number (three or two or monotherapy), and the cumulative dose received by patients on long-term.

REFERENCES

1. Howes OD, Murray RM. Schizophrenia: An integrated sociodevelopmental-cognitive model. Lancet. 2014;383(9929):1677-1687.
2. Whiteford HA et al. Global burden of disease attributable to mental and substance use disorders: Findings from the Global Burden of Disease Study 2010. Lancet. 2013;382(9904):1575-1586.
3. Bruijnzeel D et al. Antipsychotic treatment of schizophrenia: An update. Asian J Psychiatr. 2014;11:3-7.
4. Taylor JH et al. Time to Clinical Response in the Treatment of Early Onset Schizophrenia Spectrum Disorders Study. J Child Adolesc Psychopharmacol. 2021;31(1):46-52.
5. Yoshida K, Takeuchi H. Dose-dependent effects of antipsychotics on efficacy and adverse effects in schizophrenia. Behav Brain Res. 2021;402:113098.
6. Meltzer HY et al. Lurasidone in the treatment of schizophrenia: A randomised, double-blind, placebo- and olanzapine-controlled study. Am J Psychiatry. 2011;168(9):957-967.
7. Stahl SM et al. Effectiveness of lurasidone for patients with schizophrenia following 6 weeks of acute treatment with lurasidone, olanzapine, or placebo: A 6-month, open-label, extension study. J Clin Psychiatry. 2013;74(5):507-515.