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Is Aripiprazole an effective adjunct to reduce metabolic adverse effects cause by Clozapine in Schizophrenic Patients: A Systematic Review

Student[a]: Avtaar Singh | **Supervisor(s)[b]:** Soban Sadiq

Abstract

Background: Clozapine is an atypical antipsychotic drug which is used in the treatment of psychotic disorders such as schizophrenia. It has been associated with adverse effects such as, hyperglycaemia, hypercholesterolaemia and weight gain. It has been suggested that Aripiprazole (a newer atypical antipsychotic) reduces some of the metabolic adverse effects caused by Clozapine. This systematic review aims to assess the evidence regarding the effectiveness of adjunctive Aripiprazole (to Clozapine) to reduce these adverse effects.

Methods: A systematic review was conducted with a narrative synthesis (due to heterogeneity in the data) by one individual. A comprehensive search strategy was developed and applied to five academic search engines. Using the PRISMA flow diagram, the search had a total of 52 results with final inclusion of 8 research articles. Based on specific inclusion and exclusion criteria, a broad range of study designs were included in the review to investigate the effect of adjunctive Aripiprazole on Clozapine induced metabolic adverse effects. Key outcomes were identified which included: glucose levels, lipid profile, body weight and waist circumference. The results were narratively synthesised, and conclusions were drawn based on the information found.

Results: Adjunctive Aripiprazole may have a role in improving LDL and total cholesterol levels in addition to body weight in those receiving treatment with Clozapine. Fasting glucose levels and waist circumference showed some improvement, but overall evidence is currently limited. Since there is limited research in the form of randomised control trials, further research is required in order to provide accurate evidence-based guidelines for clinical practice.

Conclusions: Adjunctive Aripiprazole showed variable effects on metabolic parameters with Clozapine use, however reductions in LDL, total cholesterol and bodyweight appeared consistent among the majority of the data. This showed that Aripiprazole does have some effect in reducing metabolic adverse effects caused by Clozapine however, the complex nature of possible factors that could determine metabolic changes highlights a need for further investigation and consideration of individual subject factors. In addition, gaps in the

current research such as longer RCTs, boarder demographics and limited research regarding effective dose response, prompt the need for further investigation.

Keywords: Aripiprazole | Clozapine | Adjunct | Metabolic

[a] 4th Year Medical Student, Kent and Medway Medical School, Canterbury, United Kingdom

[b] Senior lecturer, Kent and Medway Medical School, Canterbury, United Kingdom

Main contact email: kmmsas2519@canterbury.ac.uk