Combined use of electroconvulsive therapy and antipsychotics (both clozapine and non-clozapine) in treatment resistant schizophrenia: A comparative meta-analysis


Abstract

Aim: To assess the relative efficacies of clozapine plus Electroconvulsive Therapy (ECT) compared against non-clozapine typical and atypical antipsychotics plus ECT for the treatment of “Treatment Resistant Schizophrenia” (TRS). Primarily to assess if clozapine delivers a significant improvement over other antipsychotics when combined with ECT.

Design: Major electronic databases were searched between 1990 and March 2017 for trials measuring the effects of either clozapine augmented ECT, other antipsychotic-augmented ECT, or both. After the systematic review of the data, a
random-effects meta-analysis was conducted measuring the relative effect sizes of the different treatment regimens.

**Subjects:** 1179 patients in 23 studies reporting the usage of ECT augmentation with antipsychotics. A total of 95 patients were tested with clozapine, and ECT (9 studies) and 1084 patients were tested with non-clozapine antipsychotics (14 studies) such as flupenthixol, chlorpromazine, risperidone, sulpiride, olanzapine, and loxapine with concurrent ECT treatment considered for systematic review. Of these, 13 studies reported pre and post-treatment scores were included in the meta-analysis.

**Main outcome measures:** The main outcome measure was the presence and degree of both positive and negative psychotic symptoms, as measured by either of two standardized clinician administered tests, the Brief Psychiatric Rating Scale (BPRS), and the Positive and Negative Symptom Scale (PANSS).

**Results:** The comparison of the different antipsychotics established the supremacy of ECT-augmented clozapine treatment against other typical and atypical antipsychotics. The Forest Plot revealed that the overall standard mean difference was 0.891 for non-clozapine studies and 1.504 for clozapine studies, at a 95% interval. Furthermore, the heterogeneity plots showed that while clozapine studies showed no significant heterogeneity, non-clozapine studies showed an I² statistic value at 42.19%, suggesting moderate heterogeneity. Lastly, publication bias showed asymmetrical plots and significant values of Kendal's tau and Egger's rank test.

**Conclusion:** ECT augmentation technique was found to be effective in the reduction of psychometric scale scores, and the resulting improvement was significant. Clozapine maintained its stance as the most effective treatment for Treatment-Resistant Schizophrenia, followed by flupenthixol.

Keywords: Evidence-based medicine, Psychiatry

1. **Introduction**

Schizophrenia is a complex mental disorder in which the individual suffers from an altered perception of his/her surroundings, characterized by severe impairment of one’s thoughts, feelings, and actions (National Institute of Mental Health). The underlying cause of the disease has not yet been fully established; hence the treatment focuses more on the abatement of the disabling symptoms (National Institute of Mental Health). The treatment follows an intensive course of pharmacological and non-pharmacological therapies, which are used in combination to design the desired course of treatment for the patient [1]. Clozapine is the gold standard and most effective pharmacological drug prescribed for the treatment of schizophrenia [2]. Besides clozapine, other typical and atypical antipsychotics are also prescribed to the patients, depending upon the side effects and target symptom manifestations.
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات