INPLASY PROTOCOL

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None declared.

Different monoclonal antibodies and immunosuppressants administration in patients with Neuromyelitis Optica Spectrum Disorder: A Bayesian Network Meta-Analysis

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Review question / Objective: **(1) participants: adult patients over 18 years with NMOSD; (2) intervention: monoclonal antibodies and immunosuppressants in patients with NMOSD; (3) outcomes: efficacy outcomes included annualized rate of relapse (ARR), EDSS score, relapse rates; Safety outcomes contains adverse events (AEs), gastrointestinal intolerance, leukopenia, hepatotoxicity; (4) study type: RCT and cohort studies.**
Condition being studied: **Neuromyelitis optica spectrum disorder (NMOSD) is an inflammatory neurological disorder which is common in neurological department. Current studies did not reveal the efficacy and safety of various monoclonal antibodies and immunosuppressants in patients with NMOSD. The aim of our study is to evaluate which drug intervention is the optimal therapy for NMOSD in controlling relapse, ARR and EDSS based on clinical evidence so far. In our study, we concluded the most effective and most safe drugs in NMOSD patients and made a rank probability of currently used antibodies and immunosuppressants.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 December 2022 and was last updated on 04 December 2022 (registration number INPLASY2022120018).

INTRODUCTION

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METHODS

Participant or population: Patents over 18 who were diagnosed with NMOSD.

Intervention: Patients who used monoclonal antibodies and immunosuppressants including rituximab, MMF, Eculizumab, and azathioprine etc.

Comparator: patients who had placebo during the treatment.

Study designs to be included: Randomized controlled trials, prospective studies, retrospective studies.

Eligibility criteria: (1) conference abstracts and case reports;(2) studies without complete data; (3) studies not written in English; (4) studies with high risk.

Information sources: Pubmed, Embase, and the Cochrane Library.

Main outcome(s): Efficacy outcome including ARR, EDSS, and relapse rates; Safety outcome including total AEs, gastrointestinal intolerance, hepatotoxicity, leukopenia.

Quality assessment / Risk of bias analysis: The quality of evidence was assessed by the Grading, Assessment, Development and Evaluation (GRADE) working group.

Strategy of data synthesis: Review manager, STATA 17.0 and R 4.1.3 software was used to analyze the data.

Subgroup analysis: No subgroup analysis was conducted in our meta-analysis.

Sensitivity analysis: Sensitive analysis was conducted using R 4.1.3 software and the result indicated that the network was robust

Country(ies) involved: China.

Keywords: NMOSD, Rituximab, Azathioprine, network.

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