

INPLASY PROTOCOL

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Support: N/A.

Review Stage at time of this submission: The review has not yet started.

Conflicts of interest:
None declared.

The efficacy and safety of sodium nitroprusside in the treatment of schizophrenia: an updated systematic review and meta-analysis

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Review question / Objective: To evaluate the efficacy and safety of intravenous sodium nitroprusside in the treatment of schizophrenia.

Condition being studied: Schizophrenia is a complex and hereditary mental illness. Sodium nitroprusside is currently being studied as a potential antipsychotic. However, the report on its effectiveness is not uniform and there is some controversy.

Eligibility criteria: Subjects were schizophrenic patients diagnosed by diagnostic and Statistical Manual of Mental Disorders with no limitation on race, nationality, sex and disease course; Randomized controlled trials (RCTs); The intervention group received intravenous injection of sodium nitroprusside, The control group received normal saline or other methods, and the Settings of the two groups were completely consistent except whether sodium nitroprusside was used or not; Outcome indicators were positive and Negative Symptom Scale (PANSS), including PANSS Positive Scale, PANSS Negative Scale, PANSS General Psychopathology Scale, and 18-item Brief Psychiatric Rating Scale (BPRS-18).

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 09 June 2022 and was last updated on 09 June 2022 (registration number INPLASY202260040).

INTRODUCTION

Review question / Objective: To evaluate the efficacy and safety of intravenous sodium nitroprusside in the treatment of schizophrenia.

Condition being studied: Schizophrenia is a complex and hereditary mental illness. Sodium nitroprusside is currently being studied as a potential antipsychotic. However, the report on its effectiveness is not uniform and there is some controversy.

METHODS

Search strategy: Take "PubMed" as an example: (((((Disorder, Schizophrenic) OR (Disorders, Schizophrenic)) OR (Schizophrenic Disorder)) OR (Schizophrenias)) OR (Schizophrenic Disorders)) OR ("Schizophrenia"[Mesh])) AND (((("Nitroprusside"[Mesh]) OR (Disodium Salt Nitroprusside)) OR (Sodium Nitroprusside))).

Participant or population: Subjects were patients diagnosed with schizophrenia through the Diagnostic and Statistical Manual of Mental Disorders, and their race, nationality, gender and disease course were not limited.

Intervention: The intervention group received intravenous injection of sodium nitroprusside.

Comparator: The control group received normal saline or other methods. The Settings of the two groups were completely consistent except whether sodium nitroprusside was used or not.

Study designs to be included: Randomized controlled trials (RCTs).

Eligibility criteria: Subjects were schizophrenic patients diagnosed by diagnostic and Statistical Manual of Mental Disorders with no limitation on race, nationality, sex and disease course; Randomized controlled trials (RCTs); The intervention group received intravenous injection of sodium nitroprusside, The control group received normal saline or other methods, and the Settings of the two groups were completely consistent except whether sodium nitroprusside was used or not; Outcome indicators were positive and Negative Symptom Scale (PANSS), including PANSS Positive Scale, PANSS Negative Scale, PANSS General Psychopathology Scale, and 18-item Brief Psychiatric Rating Scale (BPRS-18).

Information sources: English database: PubMed, Web of Science, EMBase,

Cochrane Library Chinese database: WanFang Data, CBM, and CNKI.

Main outcome(s): Positive and Negative Symptom Scale (PANSS), including PANSS Positive Scale, PANSS Negative Scale, PANSS General Psychopathology Scale.

Additional outcome(s): 18-item Brief Psychiatric Rating Scale (BPRS-18).

Quality assessment / Risk of bias analysis: Quality was assessed according to the bias risk assessment tool in Cochrane Handbook for systematic reviews of interventions.

Strategy of data synthesis: Meta-analysis was performed on the extracted data in Review Manager 5.3. Mean difference (MD) or standard mean difference (SMD) were used as the effect size of outcome indicators according to the combination.

Subgroup analysis: There was no heterogeneity and the fixed effect model was used for analysis. In case of heterogeneity, a random-effect model was used, and sensitivity analysis or subgroup analysis was performed simultaneously.

Sensitivity analysis: There was no heterogeneity and the fixed effect model was used for analysis. In case of heterogeneity, a random-effect model was used, and sensitivity analysis or subgroup analysis was performed simultaneously.

Country(ies) involved: China.

Keywords: sodium nitroprusside (SNP); schizophrenia (SZ); Positive and Negative Syndrome Scale (PANSS);systematic review; system meta-analysis.

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