International Platform of Registered Systematic Review and Meta-analysis Protocols

INPLASY

INPLASY2023100004

doi: 10.37766/inplasy2023.10.0004

Received: 02 October 2023

Published: 02 October 2023

Safety and efficacy of vesicular monoamine transporter 2 inhibitors for the treatment of Huntington's disease: a review and meta-analysis

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ADMINISTRATIVE INFORMATION

Support - Suzhou Development of health care (No. M2022050).

Review Stage at time of this submission - Completed but not publishe.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2023100004

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 October 2023 and was last updated on 02 October 2023.

INTRODUCTION

Review question / Objective The treatment of Huntington's disease.

Condition being studied Huntington's disease is an autosomal dominant neurodegenerative disease characterized by chorea, cognitive symptoms and behavioral symptoms. It is a serious degenerative neurological disease caused by abnormal amplification of CAG sequence on the short arm of chromosome four, which causes Huntington's protein to produce mutants upon translation. The incidence in North America, and Europe is 0.570 per 100,00 persons and in Asia is 0.04 per 100,00 persons. The geographical variation in the incidence of this genetic disease may be related to genetic haplotypes.

METHODS

Participant or population Adult patients with Huntington's disease.

Intervention Patients who received VMAT2 inhibitors were defined as the intervention group.

Comparator Patients who received placebo were the comparison group.

Study designs to be included the treatment of Huntington's disease.

Eligibility criteria 1, Other types of non-RCT. 2,non-English.

Information sources PubMed, Embase, and Cochrane electronic databases.

Main outcome(s) Compared to placebo, VMAT2 inhibitors effectively reduced UHDRS TMC score and significantly increased CGIC and PGIC in Huntington patients. In terms of safety outcomes, VMAT2 inhibitors made patients somenolence.

Quality assessment / Risk of bias analysis The bias risk was evaluated using the Cochrane Collaboration tool. The Grading of Recommendations Assessment, Development, and Evaluation scale was used to evaluate the quality of included studies.

Strategy of data synthesis Review Manager 5.3 software was used for all statistical analyses. Continuous and dichotomous variables have been presented as mean difference (MD) and risk ratios (RRs) with 95% confidence intervals (CIs).

Subgroup analysis None.

Sensitivity analysis Statistical heterogeneity was evaluated using the Chisquare Q test and I2statistics.

Country(ies) involved China.

Keywords Huntington's disease.

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