INPLASY PROTOCOL

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

Conflicts of interest: **None.**

Effect of DPP-4 inhibitor on Cognitive Dysfunction in Diabetes: A systematic review and meta-analysis protocol

S, Liu[1]; H, Deng[2]; Q, Chen[3].

Review question / Objective: **Could DPP4 inhibitors protect cognitive function compared to other hypoglycemic agents or placebo?**
Condition being studied: **Some studies have shown that DPP4 inhibitors can play a protective role by controlling blood glucose and blocking the ddp-4 to attach GLP-1 degradation and prolong GLP-1, promoting the growth of neurites and the formation of synapses.**
Information sources: **PubMed, EMBASE, Cochrane Library, clinicaltrials.gov, Web of Science, China National Knowledge Infrastructure (CNKI), and Wanfang Databases will be searched, and incomplete data can be obtained by contacting the author via email.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 April 2020 and was last updated on 26 April 2020 (registration number INPLASY202040185).

INTRODUCTION

Review question / Objective: **Could DPP4 inhibitors protect cognitive function compared to other hypoglycemic agents or placebo?**

Condition being studied: **Some studies have shown that DPP4 inhibitors can play a protective role by controlling blood glucose and blocking the ddp-4 to attach GLP-1 degradation and prolong GLP-1, promoting the growth of neurites and the formation of synapses.**

METHODS

Participant or population: Patients with type 2 diabetes.

Intervention: Any of the DPP-4 inhibitors.

Comparator: Placebo or any other hypoglycemic drugs.

Study designs to be included: Randomized controlled clinical trials.

Eligibility criteria: 1 The RCT subjects there were patients with type 2 diabetes; 2 The experimental group was treated with DPP4 inhibitors (without limiting the types of DPP4 inhibitors); 3 The control group was treated with placebo or other hypoglycemic drugs; 4 Before and after the experiment, the cognitive function of patients was evaluated.

Information sources: PubMed, EMBASE, Cochrane Library, clinicaltrials.gov, Web of Science, China National Knowledge Infrastructure (CNKI), and Wanfang Databases will be searched, and incomplete data can be obtained by contacting the author via email.

Main outcome(s): Timing and effect measures.

Quality assessment / Risk of bias analysis: PubMed, EMBASE, Cochrane Library, clinicaltrials.gov, Web of Science, China National Knowledge Infrastructure (CNKI), and Wanfang Databases will be searched, and incomplete data can be obtained by contacting the author via email.

Strategy of data synthesis: MESH plus free words.

Subgroup analysis: The following subgroup analyses will be performed if sufficient data are available: ▶ Effect of treatment at different doses. ▶ Patient demographics (age, gender and illness severity). ▶ Biomarkers of inflammation and oxidative stress.

Sensibility analysis: When there are enough studies, more than 9, conduct sensitivity analysis.

Language: English and Chinese.

Country(ies) involved: China.

Keywords: DPP-4 inhibitor Cognitive Dysfunction Diabetes.

Contributions of each author:
Author 1 - Shiyu Liu - Author 1 drafted the manuscript.