

INPLASY PROTOCOL

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All authors have no conflict of interest.

Efficacy and safety of surgical therapy for chronic carotid occlusion: a systematic review

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Review question / Objective: How does surgical therapies impact on the prognostics of patients with chronic carotid occlusion compared with medicine therapy? Dose surgical therapies for chronic carotid occlusion generate more complications compared to medicine therapy?

Condition being studied: Chronic carotid artery occlusion. Neurocognitive function.

Information sources: We will search studies in PubMed/MEDLINE, embase, cochrane library, Web of Science, clinicaltrial.gov . Reference lists of eligible studies and review articles will also be screened. If key information is missing, we will contact with authors for missing data and details.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 April 2020 and was last updated on 23 April 2020 (registration number INPLASY202040149).

INTRODUCTION

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chronic carotid occlusion generate more complications compared to medicine therapy?

Condition being studied: Chronic carotid artery occlusion. Neurocognitive function.

METHODS

Search strategy: PubMed/MEDLINE, embase , Cochrane Library, and clinicaltrial.gov will be searched.

Participant or population: Adults with chronic internal carotid artery occlusion will be included. Adolescents (under 18 years of age). Adults with acute internal carotid artery occlusion will be excluded.

Intervention: Surgical therapies are approaches used for reopen the occluded carotid artery and restore the reperfusion for brain tissue. In this systematic review, surgical therapies include endarterectomy, endovascular therapy(e.e. carotid artery stent, thrombectomy), extracranial-intracranial (EI-CI) bypass surgery.

Comparator: No surgical therapies. patients who received medical therapy as the treatment for carotid artery occlusion.

Study designs to be included: We will include randomised control trials and clinical controlled trial to assess the efficacy and safety of surgical treatments, and will supplement.

Eligibility criteria: Patients with chronic internal carotid artery occlusion. 2. Patients reveived surgical therapies to reopen occluded artery in experimental group. 3 In control group, patients received medical therapy. 4 Clinical outcomes, such as recranialization rate, mRS, NIHSS, mortality, complications, are reported.

Information sources: We will search studies in PubMed/MEDLINE, embase, cochrane library, Web of Science, clinicaltrial.gov . Reference lists of eligible studies and review articles will also be screened. If key information is missing,we will contact with authors for missing data and details.

Main outcome(s): Recanalization rate, measured by CTA/MRA, TICI grade; Favorable outcome in 3 month, measured by mRS; Neurocognitive function in 3 month, measured by NIHSS.

Additional outcome(s): Each perioperative complications(e.g. cardiovascular events, neurological events).

Quality assessment / Risk of bias analysis: We use the the Cochrane risk of bias tool to assess methods of randomisation, treatment allocation, blinding, incomplete outcome data, selective reporting and other bias at study level. Two reviewer will be involved in the quality assessment. If consensus cannot be reached, a third reviewer will make the final decision.

Strategy of data synthesis: We use the the Cochrane risk of bias tool to assess methods of randomisation, treatment allocation, blinding, incomplete outcome data, selective reporting and other bias at study level. Two reviewer will be involved in the quality assessment. If consensus cannot be reached, a third reviewer will make the final decision.

Subgroup analysis: Several factors would impact on the efficacy and safety of surgical therapies. Therefore, if th number of included studies is more than 10, we will conduct subgroup analysis according to: kinds of surgery, study design(randomised/ non-randomised trial), age(<65 years/ ≥65 years), NIHSS(<15/≥15).

Sensibility analysis: Sensibility analysis will be performed to test result's stability.

Language: No language limits will be imposed on the search.

Country(ies) involved: China.

Keywords: Internal carotid artery; occlusion; surgical therapy.

Contributions of each author:

Author 1 - Drafted the manuscript, designed the analysis, screened the records, extracted data.