

INPLASY PROTOCOL

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Conflicts of interest:
None declared.

The relationship between obstructive sleep apnea and retinal vein occlusion : a Meta-analysis

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Review question / Objective: To evaluate the relationship between obstructive sleep apnea and retinal vein occlusion association.

Condition being studied: Retinal vein occlusion is one of the most common fundus diseases that can seriously affect the vision of the eye. Retinal vein occlusion is a vascular disease of the eye and the risk factors for its development are similar to those of the systemic lesions that cause obstructive sleep apnea. The purpose of this Meta-analysis is to evaluate the relationship between obstructive sleep apnea and retinal vein occlusion association.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 February 2022 and was last updated on 18 February 2022 (registration number INPLASY202220068).

INTRODUCTION

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obstructive sleep apnea. The purpose of this Meta-analysis is to evaluate the relationship between obstructive sleep apnea and retinal vein occlusion association.

METHODS

Participant or population: Patients who were diagnosed retinal vein occlusion.

Intervention: Retinal vein occlusion patients with obstructive sleep apnea.

Comparator: Participants without retinal vein occlusion and obstructive sleep apnea

Study designs to be included: Case control study.

Eligibility criteria: Inclusion criteria1. The type of study must be a case control study. 2. The study is about obstructive sleep apnea and retinal vein occlusion association. Exclusion criteria1. Type of literature such as case reports, reviews, duplicate reports, animal studies.2. Diagnostic criteria for the case were unclear.

Information sources: The computer searches the databases of PubMed, Embase, Cochrane Database, Web of Science, China National Knowledge Infrastructure(CNKI), China Science and Technology Journal Database(VIP), China Biology Medicine(CBM), and Wanfang Database. And a manual search was used to fill in gaps to determine the completeness of relevant research searches.

Main outcome(s): Whether obstructive sleep apnea is a significant risk factor for retinal vein occlusion. Does obstructive sleep apnea correlate with the severity of retinal vein occlusion.

Quality assessment / Risk of bias analysis: All included studies were evaluated by Newcastle-Ottawa Scale (NOS) system and the evaluation procedure was performed by two independent reviewers.

Strategy of data synthesis: I^2 statistics and Q statistic will be used for assessing heterogeneity, if $I^2 \geq 50\%$ or $p < 0.1$, we will use random effect model for pool analysis. Otherwise, a fixed-effects model will be used. And we will conduct subgroup analysis to explore potential sources of heterogeneity.

Subgroup analysis: The subgroup analysis will include age, sex, BMI.

Sensitivity analysis: After deleting any one of them, the combined results of the remaining papers are not significantly different from those without deletion, which means that the sensitivity analysis is passed.

Country(ies) involved: China.

Keywords: Obstructive Sleep Apnea, Retinal Vein Occlusion, Meta-analysis.

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