INPLASY PROTOCOL

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None declared.

Changes of choroidal thickness after using atropin in myopic children: a systematic review and meta-analysis

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Review question / Objective: **By evaluating the changes of choroidal thickness at different follow-up peroid after local using atropine in myopic children, to provide reference for future researches on the mechanisms of atropine in controlling myopia progression. P: myopia children; I: atropin; C: placebo or single vision glasses; O: choroidal thickness; S: RCT and non-RCT.**
Condition being studied: **Increasing prevalence of myopia these years, myopia has become a global public health problem. High myopia could lead to very severe, irreversible visual impairment even blindness. So, it is necessary to find a safe and effective treatment. Atropin had been identified that could effective controlling the myopia progression.But the mechanism is still unknown. Recent years, choroid has shown to playing a major role in slowing the myopia progression during atropin treatment period. However the results of published studies are vary a lot.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 07 February 2023 and was last updated on 07 February 2023 (registration number INPLASY202320027).

INTRODUCTION

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METHODS

Participant or population: Myopia children.

Intervention: Atropin.

Comparator: Placebo or single vision glasses.

Study designs to be included: RCT and non-RCT.

Eligibility criteria: (1)the participants were not more than 18 years old.(2)the participants were diagnosed as myopia with Spherical equivalent refraction less than 0.25D measured by cycloplegic autorefraction at baseline.(3) the study reported the outcome of choroidal thickness of atropine treatment.

Information sources: Pubmed、Cochrane、Embase、web of science、Scopus and Chinese databases such as CBM、CIKN、WANFANG、VIP、duxiu from inception through december , 2022.

Main outcome(s): different dose atropin can siginificant increasing the choroidal thickness, low-moderated dose then rose slightly and became stable until 3 month.

Quality assessment / Risk of bias analysis: The quality of RCT studies were assessed according to Cochrane Collaboration's tool.The quality of non-RCT studies were assessed according to methodological index for non-randomized studies (MINORS). Publication bias of the articles was evaluated using funnel plots.

Strategy of data synthesis: Revman (version 5.3; Cochrane Collaboration) software was used for statistical analysis.

Subgroup analysis: None.

Sensitivity analysis: sensitivity analysis was performed by eliminating study successively.

Country(ies) involved: China.

Keywords: myopia child、atropin、choroidal thickness、meta-analysis.

Contributions of each author:
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Author 4 - Bai jie.
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