

INPLASY PROTOCOL

To cite: Liu et al. Acupuncture as a complementary therapy for hydrocephalus in children: a protocol for systematic review and meta-analysis. Inplasy protocol 202240169. doi: 10.37766/inplasy2022.4.0169

Received: 29 April 2022

Published: 29 April 2022

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Support: No.

Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

Acupuncture as a complementary therapy for hydrocephalus in children: a protocol for systematic review and meta-analysis

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Review question / Objective: Inclusion criterias Types of Studies The included studies were randomized controlled trials (RCTs) of acupuncture as an adjuvant treatment for hydrocephalus in children. There are no language restrictions and publication date restrictions. Type of patients Children under the age of 18, regardless of gender or race. All the patients were diagnosed as pediatric hydrocephalus by MRI or CT, which met the diagnostic criteria of Congress of Neurological Surgeons (CNS). Type of invention The observation group received routine treatment combined with acupuncture. Regular treatment included drug treatment (acetazolamide, furosemide) and surgical treatment (ETV treatment, VPS treatment). Type of control The control group received routine treatment. Type of outcomes Main outcomes and secondary outcomes. The main outcomes were the overall effective rate and the incidence of infection. The secondary outcomes were cerebrospinal fluid leakage, secondary surgery and adverse events. Exclusion criterias Age groups were not mentioned. Repeated report study Research with defective research design and poor quality The literature types are review, letter and conference paper Studies with incomplete data and unclear outcome effects Animal experimental research.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 April 2022 and was last updated on 29 April 2022 (registration number INPLASY202240169).

INTRODUCTION

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Condition being studied: Hydrocephalus in children is a common clinical brain disease in children with neurological dysfunction. Modern medicine mainly adopts conservative treatment and surgical treatment. The treatment effect varies from person to person, and there are complications such as infection. Acupuncture as a complementary treatment for hydrocephalus in children. However, there is still insufficient evidence to evaluate the clinical effect of acupuncture as a complementary therapy in the treatment of hydrocephalus in children.

METHODS

Participant or population: No patients participated in this study.

Intervention: The observation group received routine treatment combined with acupuncture. Regular treatment included drug treatment (acetazolamide, furosemide) and surgical treatment (ETV treatment, VPS treatment).

Comparator: The control group received routine treatment.

Study designs to be included: This research report complies with the preferred report project line and meta-analysis (PRISMA) agreement for systematic review. The included studies were randomized controlled trials (RCTs) of acupuncture as an adjuvant treatment for hydrocephalus in children. There are no language restrictions and publication date restrictions.

Eligibility criteria: Inclusion criterias Types of Studies The included studies were randomized controlled trials (RCTs) of acupuncture as an adjuvant treatment for hydrocephalus in children. There are no language restrictions and publication date restrictions. Type of patients Children under the age of 18, regardless of gender or race. All the patients were diagnosed as pediatric hydrocephalus by MRI or CT, which met the diagnostic criteria of Congress of Neurological Surgeons (CNS). Type of invention The observation group received routine treatment combined with acupuncture. Regular treatment included drug treatment (acetazolamide, furosemide) and surgical treatment (ETV treatment, VPS treatment). Type of control The control group received routine treatment. Type of outcomes Main outcomes and secondary outcomes. The main outcomes were the overall effective rate and the incidence of infection. The secondary outcomes were cerebrospinal fluid leakage, secondary surgery and adverse events. Exclusion criterias Age groups were not mentioned. Repeated report study Research with defective research design and poor quality The literature types are review, letter and conference paper Studies with incomplete data and unclear outcome effects Animal experimental research.

Information sources: From the establishment of the database to March 2022, we will search the following databases: PubMed, EMBASE, OVID, Allied and Alternative Medicine (AMED), The Cochrane Library, China Biology Medicine disc (CBMdisc), Wanfang database, China

National Knowledge Infrastructure database(CNKI), VIP database,Japan Science and Technology Information Aggregator Electronic(J-STAGE).

Main outcome(s): The main outcomes were the overall effective rate and the incidence of infection.

Quality assessment / Risk of bias analysis:

Two researchers used the Cochran bias risk assessment tool to assess the quality of each included study. The evaluation mainly includes selection (random sequence generation and distribution concealment), blinding of researchers and subjects, blind evaluation of research results, follow-up, selective reporting of research results, and other areas. For each aspect, the trial will be rated as having high risk, low risk or unclear risk of bias. The two researchers jointly agree on differences, and if necessary, the third researcher will intervene in the discussion and make the judgment.

Strategy of data synthesis: We will conduct a meta-analysis using Revman v.5.3 software(International Cochrane Collaboration Network to produce and preserve Cochrane system evaluation Special software). Using fixed effect model ($P > 0.1$ or $I^2 < 50\%$). Conversely, with high heterogeneity, a random effects model was used.

Subgroup analysis: If found statistical heterogeneity, we will through subgroup analysis to investigate the clinical source of heterogeneity. According to different acupuncture methods (scalp acupuncture, abdominal acupuncture, various acupoints, acupuncture duration), hydrocephalus caused by different reasons, treatment course and follow-up time, we will conduct a subgroup analysis.

Sensitivity analysis: We will eliminate low-quality studies such as research quality and missing data based on the Cochrane manual, conduct merger analysis, compare them with the merger effect before elimination, and explore the impact of

eliminated studies on the merger effect. If there is no significant change in the combined effect before and after, it indicates that the results of meta-analysis are relatively stable and reliable.on the contrary, the stability and reliability are poor.

Country(ies) involved: China.

Keywords: hydrocephalus in children; Acupuncture.

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