

INPLASY PROTOCOL

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None declared.

Effectiveness of acupoint therapy on motor function in patients with Parkinson's disease: a protocol for systematic review and meta-analysis

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Review question / Objective: This protocol aim to evaluate the efficacy of the combination of acupoint therapy with conventional medication for the treatment of motor function in patients with parkinson's disease compared to other treatment strategies based on conventional medication.

Condition being studied: Parkinson's disease (PD) is a complex progressive neurodegenerative disorder, resulting from the decrease of dopamine-producing cells in substantia nigra, which is characterized by motor symptoms (bradykinesia, static tremor, myotonia and postural instability) and various non-motor symptoms. To date, anti-parkinson drug treatment is the mainly strategy for PD, however, long-time usage of drugs can lead to motor complications that suffering millions of people in the world. Thus, many studies begin to add complementary and adjuvant therapy among routine treatment. Acupoint is a specific conception in traditional Chinese medicine which has a more direct stimulating effect on body without side effects. Although it have been applied and reported in many trails, improvements in motor function of PD still unclear. In this review, we systematically assess a variety of types of acupoint-based methods in the treatment of motor function in PD.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 May 2022 and was last updated on 12 May 2022 (registration number INPLASY202250072).

INTRODUCTION

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METHODS

Search strategy: The search terms are as follows for exemplary database(PubMed): ("Parkinson Disease"[MeSH Terms] OR ("Parkinson Disease"[Title/Abstract] OR "idiopathic parkinson s disease"[Title/Abstract] OR "lewy body parkinson s disease"[Title/Abstract] OR "parkinson s disease*"[Title/Abstract] OR "idiopathic parkinson disease"[Title/Abstract] OR "lewy body parkinson disease"[Title/Abstract] OR "Parkinsonism"[Title/Abstract] OR "paralysis agitans"[Title/Abstract] OR "tremor syndrome"[Title/Abstract])) AND ("Acupuncture"[MeSH Terms] OR "Acupuncture Therapy"[MeSH Terms] OR "Acupressure"[MeSH Terms] OR "Massage"[MeSH Terms] OR ("Acupuncture"[Title/Abstract] OR "pharmacoacupuncture*"[Title/Abstract] OR "acupotomy"[Title/Abstract] OR "acupotomies"[Title/Abstract] OR "pharmacopuncture"[Title/Abstract] OR "needle"[Title/Abstract] OR "needling"[Title/Abstract] OR "body acupuncture"[Title/Abstract] OR "electroacupuncture"[Title/Abstract] OR "electro-acupuncture"[Title/Abstract] OR

"auricular acupuncture"[Title/Abstract] OR "ear acupuncture"[Title/Abstract] OR "warm needle"[Title/Abstract] OR "warm needling"[Title/Abstract] OR "scalp acupuncture"[Title/Abstract] OR "body needling"[Title/Abstract] OR "manual acupuncture"[Title/Abstract] OR "auricular pressure"[Title/Abstract] OR "bee venom acupuncture"[Title/Abstract] OR "abdominal acupuncture"[Title/Abstract] OR "acupoint catgut embedding"[Title/Abstract] OR "Acupressure"[Title/Abstract] OR "acupoint injection"[Title/Abstract] OR "hydroacupuncture"[Title/Abstract] OR "acupoint*"[Title/Abstract]) OR ("massage"[Title/Abstract] OR "tui na"[Title/Abstract] OR "Moxibustion"[Title/Abstract] OR "gua sha"[Title/Abstract] OR "press-stroking"[Title/Abstract] OR "ba guan"[Title/Abstract] OR "cupping"[Title/Abstract])) AND 1950/01/01:2022/03/31 [Date - Publication] AND "humans"[MeSH Terms].

Participant or population: Patients diagnosed with PD will be accepted without restrictions of age, gender, race or disease duration.

Intervention: The intervention will be the combination of acupoint therapy with conventional medication. Acupoint therapy has a wide range, we defined it as acupuncture with or without electrical stimulation, manual acupuncture, warm acupuncture(needle), auricular(ear) acupuncture, auricular pressure, scalp acupuncture, abdominal acupuncture, bee venom acupuncture, pharmacoacupuncture, acupoint catgut embedding, acupoint injection, hydroacupuncture, acupotomy, acupressure, massage, moxibustion, press-stroking or cupping.

Comparator: The control group received conventional medication. We define which as different types of anti-Parkinson drugs, used alone or in combination. If the control group combined with other medicines or treatments, the acupoint therapies are the only intervention that differed between study groups.

Study designs to be included: Only randomized clinical trials will be included.

Eligibility criteria: 1. Types of studies. Only RCTs of acupoint therapy for PD-related motor disorders will be included. Reviews, case reports, letters, non-RCTs, protocol, animal experiments, and cell experiments will be excluded. 2. Participants. Adults diagnosed with Parkinson's Disease. 3. Interventions. All types of acupoint therapy combined with conventional medication. 4. Outcomes. The primary outcome will be motor function. Exclusion criteria: (1) The study didn't evaluate the effects of acupoint therapy on motor function of PD. (2) The intervention group consisted of more than three interventions. (3) The study compared different types of intervention. (4) Articles with insufficient information, incorrect data or republished.

Information sources: PubMed, Embase, Web of science, Cochrane Library, Chinese Biomedical Literatures Database (CBM), China National Knowledge Infrastructure (CNKI), Chinese Scientific Journal Database (VIP), and Wan Fang Database will be searched from January 1950 to March 2022, with no language restriction.

Main outcome(s): Motor function, assessed with valid and reliable measures used in the Parkinson's population such as motor component of United Parkinson's Disease rating scale (UPDRS III), Webster scale, Timed Up and Go test, 10MWT, 6MWT or gait device, etc.

Quality assessment / Risk of bias analysis: The methodological quality assessment will be conducted using the risk of bias tool from Cochrane Handbook for systematic reviews of interventions V6.0.

Strategy of data synthesis: RevMan5.4.1 Software will be used for data synthesis. We first calculate the effect size and its 95%CI of each study. Then, select statistical model according to the type of data (continuous or dichotomous). The heterogeneity test will be performed using the I^2 test. If $P \geq 0.1$, $I^2 \leq 50\%$, it is considered that the trials included are homogeneous

and the fixed effect model will be used for analysis. Else, $P > 50\%$, it implies that the included studies are heterogeneous and a random effect model will be used for analysis. $P < 0.05$ is considered statistically significant for all analyses.

Subgroup analysis: Subgroup analysis will be implemented to make indirect comparisons, by heterogeneity tests, to find out whether effect differ from different intervention categories.

Sensitivity analysis: If there are adequate studies, sensitivity analysis will be performed to describe whether conclusions are robust to decisions made in the systematic review.

Language: English.

Country(ies) involved: China.

Keywords: Parkinson's disease; motor function; acupoint therapy; Meta-analysis.

Contributions of each author:

Author 1 - Yingying Sun.

Author 2 - Jili Sheng.

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