INPLASY PROTOCOL

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None declared.

The effects of mindfulness-based interventions on depression, anxiety, sleep and treatment compliance in patient undergoing hemodialysis: a meta-analysis

Lan, YM[1]; Zhu, ZZ[2]; Ma, ZL[3]; Zhang, YL[4]; Li, TX[5].

Review question / Objective: The aim of this systematic review is to compare mindfulness and routine treatment in terms of efficacy and acceptability in the mental health problem in hemodialysis patient to better inform clinical practice. To this end, the proposed systematic review will address the following question: Which is the best choice to reduce depression and anxiety, improve sleep quality and treatment compliance in patient undergoing hemodialysis, mindfulness or routine treatment.

Information sources: Electronic databases: PubMed, Embase, Scopus, Cochrane, Clinical trails,China National Knowledge Infrastructure, WANFANG DATA, China Science and Technology Journal Database.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 March 2023 and was last updated on 14 March 2023 (registration number INPLASY202330049).

INTRODUCTION

Review question / Objective: The aim of this systematic review is to compare mindfulness and routine treatment in terms of efficacy and acceptability in the mental health problem in hemodialysis patient to better inform clinical practice. To this end, the proposed systematic review will address the following question: Which is the best choice to reduce depression and anxiety, improve sleep quality and treatment compliance in patient undergoing hemodialysis, mindfulness or routine treatment.

Rationale: There is no Meta-analysis in this field. Only a systematic review without Meta-analysis was conducted in 2022, found that mindfulness intervention had no significant effect on improving patients' sleep quality. But results from other researches show the different. Also the systematic review only included 6 studys. Therefore more evidence is needed to clarify the impact of mindfulness intervention on hemodialysis patients so that it can be rolled out to a wider population.

Condition being studied: Hemodialysis, the main treatment for patients with renal failure, is the most common form of dialysis in most countries. But hemodialysis is an invasive, complex and time-consuming procedure that can cause great emotional distress and stress to patients and affect their treatment compliance. Studies have found that patients undergoing hemodialysis for a long time may suffer from depression, anxiety and other negative emotions, as well as insomnia and other symptoms, and patient compliance decreases with the increase of dialysis time. The decline in patient compliance will in turn affect patients' emotions and quality of life. In addition to drugs, patients undergoing hemodialysis also need to receive other non-drug intervention, such as psychological intervention, so as to improve the emotion and sleep of hemodialysis patients and improve patient compliance, so as to improve the quality of life of hemodialysis patients.

METHODS

Search strategy: Pubmed: "renal dialysis"[MeSH Terms] OR "Dialysis"[All Fields] OR "hemodialysis"[All Fields] OR "maintenance dialysis"[All Fields] OR "maintenance dialysis"[All Fields] OR "hematodialysis"[All Fields] OR "haemodialysis"[All Fields] OR "renal dialysis"[All Fields]) AND ("mindfulness"[MeSH Terms] OR "meditation"[All Fields] OR "mindfulness*"[All Fields] OR "mindfulness-based"[All Fields] OR "MBSR"[All Fields] OR "MBCT"[All Fields] OR "M-BCT"[All Fields] OR "meditat*"[All Fields] OR "Vipassana"[All Fields] OR "contemplative science"[All Fields] OR "acceptance-and-commitment therapy"[All Fields].

Participant or population: Adult patients who underwent regular hemodialysis therapy for more than 3 months.

Intervention: Mindfulness-based intervention.

Comparator: Routine treatment.

Study designs to be included: Randomized controlled trials is included.

Eligibility criteria: Additional inclusion criteria:Study outcome at least included one measures of depression, anxiety, sleep, and patient compliance. Additional exclusion criteria:(1)Study that unable to get the specific outcome data.(2)Study that Patients in the intervention group received intervention other than mindfulness.

Information sources: Electronic databases: PubMed, Embase, Scopus, Cochrane, Clinical trails,China National Knowledge Infrastructure, WANFANG DATA, China Science and Technology Journal Database.

Main outcome(s): Depression level, Anxiety level, Sleep quality, Patient compliance.

Quality assessment / Risk of bias analysis: We use Cochrane Risk of Bias tool provided by the Cochrane Handbook for Systematic Reviews of Interventions RoB1.0 to analysis the Risk of bias of included studies.

Strategy of data synthesis: Cross-study heterogeneity is tested by Q test, random effects model is used for meta-analysis, and I2 values is calculated. The combined outcome indicators include measurement data and counting data. In terms of measurement data, the I-V method is used. If the same measurement tools were used, the difference in mean (MD) is used as the effect index; otherwise, the standardized

difference in mean (SMD) is used as the effect index. In terms of counting data, M-H method combined with relative Risk Ratio (RR) is used as the effect index.

Subgroup analysis: Will not run subgroup analysis.

Sensitivity analysis: We will not run subgroup analysis.

Language restriction: Only randomized clinical trials published in English and in Chinese will be considered for inclusion.

Country(ies) involved: China.

Keywords: mindfulness; hemodialysis; treatment compliance; depression; anxiety; sleep.

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