# Efficacy and safety of ginkgo preparations for attention deficit hyperactivity disorder: a systematic review protocol

Sufei He, Miao Wang, Jinhua Si, Tianyi Zhang, Hong Cui, Xiumei Gao

Abstract

Introduction
Attention deficit hyperactivity disorder (ADHD) is one of the most commonly diagnosed and treated childhood psychiatric disorders. The analogous diagnosis adopted in Europe is hyperkinetic disorder, which is defined in the WHO's International Classification of Diseases 10th edition (ICD-10). Hyperkinetic disorder includes more severe conditions. Ginkgo preparations are used in the treatment of ADHD. The present study will assess the efficacy and safety of ginkgo preparations in the treatment of ADHD in the currently published literature.

Materials and methods
All prospective randomised controlled trials (RCTs) will be included in this systematic review. Patients diagnosed with ADHD according to American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV), Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5), ICD-10 or Chinese Classification and Diagnosis of Mental Diseases third edition (CMDD) will be included. A comprehensive search for RCTs to evaluate the effectiveness and tolerance of ginkgo preparations will be performed. The primary outcomes are the ADHD Rating Scale-IV and Revised Conners' Parent Rating Scale. The secondary outcomes are quality of life evaluated by the KINDL scale, adverse effects/events, Conners' Teacher Rating Scale, Strengths and Weaknesses of ADHD Symptoms and Normal Behaviour Scale and Fremdbeurteilungsbogen für Hyperkinetische Störungen. Exclusion criteria are the following: (1) case reports, not randomised trial, non-comparative studies and (2) patients who were not diagnosed based on DSM-IV, DSM-5, ICD-10 or CMDD. The following databases will be searched from their inception until January 2018: Medline, Embase, the Cochrane Central Register of Controlled Trials, Web of Science, China Biology Medicine Disc, China National Knowledge Infrastructure Database, Wanfang Database and Chinese Scientific Journals Database. Two authors will independently perform the study selection, extract the data and assess the study quality and risk of bias.

Ethics and dissemination
This systematic review does not require ethics approval. It will be published in a peer-reviewed journal.

PROSPERO registration number CRD42017077190.