A systematic review of randomised clinical trials of Tripterygium wilfordii for rheumatoid arthritis

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CRD summary
This review concluded that Tripterygium wilfordii seems to have beneficial effects on the symptoms of rheumatoid arthritis; however, serious adverse events associated with the herb mean that this treatment cannot be recommended. There were limitations to this review but, given the lack of evidence available, the authors' conclusions are likely to be reliable.

Authors' objectives
To assess the effectiveness of Tripterygium wilfordii (T. wilfordii) for the treatment of rheumatoid arthritis.

Searching
MEDLINE, EMBASE, AMED, CINAHL and the Cochrane Controlled Trials Register were searched from inception to February 2005 without any language restrictions; the search terms were reported.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were eligible for inclusion.

Specific interventions included in the review
Studies of monopreparations of T. wilfordii were eligible for inclusion. The included studies administered either 60 mg/day T. wilfordii for 4 or 12 weeks, or 180 or 360 mg/day for 20 weeks, and compared the preparation with placebo.

Participants included in the review
Studies of patients diagnosed with rheumatoid arthritis were eligible for inclusion. The studies included patients with active symptoms for at least 6 months that did not respond to non-steroidal anti-inflammatory drugs, or patients with active symptoms for at least 1 year that did not respond to disease-modifying antirheumatic drugs. The mean age of the participants was reported as 46 and 48 years in one study, while in the other study an age range of 18 to 75 years was reported.

Outcomes assessed in the review
Studies allowing the assessment of efficacy were eligible for inclusion. The outcomes evaluated included tenderness, swelling, stiffness, grip strength, American College of Rheumatology (ARC)-20 criteria, adverse events and blood tests.

How were decisions on the relevance of primary studies made?
One author read the studies depending on the publication language, and the content was discussed and a collaborative decision reached.

Assessment of study quality
Study quality was assessed using the Jadad scale, which evaluates randomisation, blinding and withdrawals and gives a score out of 5. The authors did not state how many reviewers performed the quality assessment.

Data extraction
Two authors extracted the data but it was not clear if this was done independently.
Methods of synthesis
How were the studies combined?
The studies were combined in a narrative.

How were differences between studies investigated?
Study details were tabulated.

Results of the review
Two RCTs (n=105) were included in the review.

The Jadad scores were 3 and 5 out of a possible 5. Both studies were reported as double-blinded. One study was a quasi-crossover RCT.

Both RCTs indicated that T. wilfordii had beneficial effects on the symptoms of rheumatoid arthritis, with improvements after 12 weeks in tenderness score, swelling count, duration of morning stiffness, mean grip strength, walking time and physician- and patient-rated overall assessments (p<0.05; 1 study)). ARC-20 criteria were met by 8 out of 10 patients on high-dose T. wilfordii, 4 out of 10 on low-dose T. wilfordii, and no patients on placebo after 4 weeks.

T. wilfordii seemed to be associated with a higher rate of adverse events, including serious adverse events, compared with placebo; 4 out of 27 patients taking T. wilfordii withdrew due to adverse effects (1 study), and 15, 12 and 6 patients reported adverse events with high- and low-doses of T. wilfordii and placebo, respectively (1 study). The reported adverse events included skin rashes, cheilosis, diarrhea, amenorrhoea, hair loss and nausea.

Authors' conclusions
Limited evidence suggested that T. wilfordii seems to have beneficial effects on the symptoms of rheumatoid arthritis; however, serious adverse events associated with the herb mean that this treatment cannot be recommended.

CRD commentary
The review question was clear, and the authors undertook an extensive search without language restrictions. A single author undertook each stage of the review process, thus increasing the potential for error and bias, although this was mitigated to some degree in the study selection phase where there was discussion between the two authors. Study quality was assessed using established criteria, and the decision to combine the studies in a narrative seems appropriate. There were limitations to this review but, given the lack of evidence available, the authors' conclusions are likely to be reliable.

Implications of the review for practice and research
Practice: The authors did not recommend the use of T. wilfordii for the treatment of rheumatoid arthritis or any other disease.

Research: The authors did not state any implications for further research.

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