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[Intervention Review]

Chinese herbal medicine for treating recurrent urinary tract infections in women

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ABSTRACT

Background

Acute urinary tract infection (UTI) is a common bacterial infection that affects 40% to 50% of women. Between 20% and 30% of women who have had a UTI will experience a recurrence, and around 25% will develop ongoing recurrent episodes with implications for individual well-being and healthcare costs. Prophylactic antibiotics can prevent recurrent UTIs but there are growing concerns about microbial resistance, side effects from treatment and lack of long-term benefit. Consequently, alternative treatments are being investigated. Chinese herbal medicine (CHM) has a recorded history of treating UTI symptoms and more recent research suggests a potential role in the management of recurrent UTIs. This review aimed to evaluate CHM for recurrent UTI.

Objectives

This review assessed the benefits and harms of CHM for the treatment of recurrent UTIs in adult women, both as a stand-alone therapy and in conjunction with other pharmaceutical interventions.

Search methods

We searched the Cochrane Kidney and Transplant's Specialised Register to 7 May 2015 through contact with the Trials Search Co-ordinator, using search terms relevant to this review. We also searched AMED, CINAHL and the Chinese language electronic databases Chinese BioMedical Literature Database (CBM), China Network on Knowledge Infrastructure (CNKI), VIP and Wan Fang Databases to July 2014.

Selection criteria

We included randomised controlled trials (RCTs) comparing treatments using CHM with either an inactive placebo or conventional biomedical treatment. RCTs comparing different CHM strategies and treatments were eligible for inclusion. Quasi-randomised studies were excluded.

Data collection and analysis

Data extraction was carried out independently by two authors. Where more than one publication of one study existed, these were grouped and the publication with the most complete data was used in the analyses. Where relevant outcomes were only published in earlier versions these data were used. All meta-analyses were performed using relative risk (RR) for dichotomous outcomes with 95% confidence intervals (CI).

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Main results

We included seven RCTs that involved a total of 542 women; of these, five recruited post-menopausal women (aged from 56 to 70 years) (422 women). We assessed all studies to be at high risk of bias. Meta-analyses comparing the overall effectiveness of treatments during acute phases of infection and rates of recurrence were conducted. Analysis of three studies involving 282 women that looked at CHM versus antibiotics suggested that CHM had a higher rate of effectiveness for acute UTI (RR 1.21, 95% CI 1.11 to 33) and reduced recurrent UTI rates (RR 0.28, 95% CI 0.09 to 0.82). Analysis of two studies involving 120 women that compared CHM plus antibiotics versus antibiotics alone found the combined intervention had a higher rate of effectiveness for acute UTI (RR 1.24, 95% CI 1.04 to 1.47) and resulted in lower rates of recurrent infection six months after the study (RR 0.53, 95% CI 0.35 to 0.80).

One study comparing different CHM treatments found Er Xian Tang was more effective in treating acute infection in post-menopausal women than San Jin Pian (80 women: RR 1.28, 95% CI 1.03 to 1.57). Analysis showed that active CHM treatments specifically formulated for recurrent UTI were more effective in reducing infection incidence than generic CHM treatments that were more commonly used for acute UTI (RR 0.40, 95% CI 0.21 to 0.77).

Only two studies undertook to report adverse events; neither reported the occurrence of any adverse events.

Authors' conclusions

Evidence from seven small studies suggested that CHM as an independent intervention or in conjunction with antibiotics may be beneficial for treating recurrent UTIs during the acute phase of infection and may reduce the recurrent UTI incidence for at least six months post-treatment. CHM treatments specifically formulated for recurrent UTI may be more effective than herbal treatments designed to treat acute UTI. However, the small number and poor quality of the included studies meant that it was not possible to formulate robust conclusions on the use of CHM for recurrent UTI in women either alone or as an adjunct to antibiotics.

PLAIN LANGUAGE SUMMARY

Chinese herbal medicine for treating recurrent urinary tract infections in women

Recurrent urinary tract infections (UTIs) are a common problem that can have a serious negative impact on well-being and healthcare costs. Although preventative antibiotics can help reduce numbers of recurrent infections, there are growing concerns about antibiotic resistance, side effects and the lack of long-term benefits from treatment. Consequently, alternative treatments such as Chinese herbal medicine (CHM) are being considered.

We evaluated the evidence for the effectiveness and safety of CHM for treating recurrent UTIs in women. Our searches to May 2015 for Western and July 2014 for Chinese literature led to the inclusion of seven studies that met our selection criteria for this review. These involved a total of 542 women.

The studies suggested that CHM used either on its own or with antibiotic treatment may be more effective than antibiotics alone for relieving acute UTIs and preventing recurrent episodes. There were only two studies that explicitly stated that adverse events were to be reported; neither reported any adverse events.

However, studies were small and assessed as having poor methodological quality; and most study participants were post-menopausal. Therefore, results should be interpreted cautiously and can only be considered as preliminary findings that may not be relevant to premenopausal women. Further research is required to provide more rigorous evidence before CHM can be routinely recommended as a treatment option for recurrent UTIs.