Review: herbal preparations may improve FEV₁ and symptoms in asthma


QUESTION: For patients with asthma, do herbal preparations improve lung function and reduce symptoms?

Data sources
Studies were identified by searching Medline, the Cochrane Library, and EMBASE/Excerpta Medica from their inception to December 1999 with the terms asthma, herb with various endings, Ayurvedic, and traditional Chinese medicine as well as names of individual herbs. Bibliographies and personal reprint collections were scanned, and experts were contacted.

Study selection
Randomised controlled trials were included if they studied patients with asthma preferably defined using American Thoracic Society criteria, and if they reported outcomes of lung function tests, FEV₁, or airway resistance.

Data extraction
Data were extracted on study characteristics and quality, treatment and control interventions, outcome measures, and results.

Main results
17 randomised controlled trials met the inclusion criteria. 6 studied Chinese herbal medicines, 8 studied Indian preparations, 1 evaluated a Japanese herbal preparation, 1 evaluated marijuana, and 1 evaluated dried ivy leaf extract. 14 of the trials scored ≤5 of a maximum of 5 on the Jadad quality scale. All trials had methodological problems (all scored 1 on the Jadad scale). All studies showed improvements in FEV₁. The agents studied were concentrated Ginkgo biloba extract (61 patients), Ligusticum wallichii (150 patients with moderate or severe bronchial asthma) (also improved self reported symptoms), the strengthening body resistance method that contained Ephedra sinica (117 patients), the reinforcing kidney and invigorating spleen principle with steroids compared with steroids alone (41 patients with severe asthma), invigorating kidney for preventing asthma tablets with conventional steroids compared with conventional steroids alone (57 patients with seasonal asthma), and weyang tonglulo mixture which contained E sinica compared with oral salbutamol and inhaled beclometasone (68 patients).

Traditional Indian herbal (Ayurvedic) medicine. Quality scores for these trials ranged from 1 to 4. All patients in the 8 trials had bronchial asthma. Boswellia serrata gum was more effective than placebo for improving FEV₁ (80 patients). Solanum xanthocarpum or S trilobatum showed improvement from baseline FEV₁, but this was not as effective as standard drugs (salbutamol or deriphylline) (60 patients). Bylophora indica was studied in 5 trials (30-195 patients) of which 3 showed an improvement in FEV₁, or symptoms; 1 trial showed 1 week improvements in self reported symptoms that were not sustained at 12 weeks. Picrosirius harrow showed no improvement in FEV₁ or symptoms over placebo (72 patients).

Other herbal treatments. Tsunara saibokuto (TJ-96) (2 preparations that include 10 herbs) improved self reported symptoms and perceptions (112 patients with steroid dependent bronchial asthma). Marijuana was evaluated in 1 study of 10 adults with bronchial asthma: the oral preparation but not the smoking route improved airway resistance. Ivy leaf extract improved airway resistance but not FEV₁ in 24 children with bronchial asthma.

Conclusion
Although a number of randomised controlled trials have shown that herbal preparations improve FEV₁, symptoms, or both in patients with asthma, their value remains uncertain because study quality is generally poor.

COMMENTARY
This systematic review by Huntley and Ernst makes an important contribution in an area of growing interest. The authors note that 60% of people with moderate asthma and 70% with severe asthma have used complementary and alternative medicine.

Although the authors included studies of any language, the databases that were searched include mainly studies of Western medicines published in English and so may not be the best source of evaluations of herbal medicines. The studies reviewed had poor methodological quality; 14 of the 17 studies scored ≤3 on the Jadad scale, and only half were double blinded. Most of the studies did not evaluate products of standardised quality.

Asthma is of considerable clinical interest, affecting about 10% of the population of England and Wales. This review is of relevance to the large number of nurses who manage patients with asthma in primary care and respiratory specialist nurses in the acute sector. The popularity of complementary treatment may arise from concerns by patients and parents about the side effects of conventional inhaled or oral steroid medication, and possibly the cost of traditional treatments.

The review indicates that herbal medicines may have an anti-inflammatory effect; however, Blanc et al raise the concern that patients’ use of alternative treatments may delay appropriate use of conventional medicines and thus increase the risk of life threatening episodes. Huntley and Ernst also emphasise that many herbal remedies have side effects (eg, headaches, nausea, bleeding, and seizures) and some interact with conventional medicines such as anticoagulants. Caution is required when using them therefore and more, better quality research about efficacy and safety is needed before nurses can confidently recommend them to patients.

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