

### Chinese herbal medicine for atopic dermatitis: Research evidence

#### **Efficacy of a Chinese herbal medicine for the treatment of atopic dermatitis: A randomised controlled study** *Complementary Therapy in Medicine* 2015;23(5):644-651.

**Background:** This multi-centre, randomised, assessor-blind, controlled study assessed the efficacy of the Chinese herbal formula Pei Tu Qing Xin Tang (PTQXT) for treating patients with atopic dermatitis (AD).

**Methods:** Patients aged 5-25 years with moderate-to-severe AD were randomised to receive a 12-week treatment involving either oral administration of PTQXT; oral administration of PTQXT combined with an external application of Chinese herbs; or oral administration of antihistamine and a placebo of PTQXT pills added to topical 1% mometasone furoate. The primary end-point measure was the change in the Scoring Atopic Dermatitis Index (SCORAD) at the end of the observation period, and secondary end-points included quality of life (QOL). The outcomes were evaluated at baseline, then every 4 weeks from week 4 to week 12 and every 8 weeks from week 12 to week 36.

**Results:** 275 patients were recruited. During the 12-week treatment period, up to the primary end-point, the mean SCORAD decreased gradually in all three groups. At week 28 and week 36, there was a significantly greater decrease in the mean SCORAD for the Chinese herbal medicine-treated groups than for the control group (at week 28,  $p=0.002$  and  $p=0.036$ , respectively; at week 36,  $p<0.001$  and  $p=0.002$ , respectively). At week 36, the difference in QOL scores showed a significantly greater improvement in both Chinese herbal medicine-treated groups than in the control group ( $p<0.001$  and  $p<0.001$ , respectively).

**Conclusion:** PTQXT is effective in decreasing the severity and improving the quality of life in patients with moderate-to-severe atopic dermatitis.

#### **Use of traditional Chinese medicine reduces exposure to corticosteroid among atopic dermatitis children: A 1-year follow-up cohort study**

*Journal of Ethnopharmacology* 2015;159:189-196.

**Background:** Atopic dermatitis is a prevalent dermatologic disease in children. Corticosteroid is an important treatment but side effects caused by long-term and excessive use heavily concern patients. Traditional Chinese medicine (TCM) is potentially an alternative treatment and might cause less adverse effects. This nationwide retrospective cohort study aimed to examine the hypothesis that TCM use is associated with lower exposure to corticosteroid.

**Methods:** Children under 12 years of age diagnosed with atopic dermatitis from 2007/1/1 to 2007/12/31. Corticosteroid use was compared between TCM users and non-users for one-year follow-up by using a general estimation equation model with propensity-score matching.

**Results:** A total of 9012 TCM users were identified and the use of corticosteroid after treatment was compared with matched TCM non-users. Use of TCM significantly reduced exposure to corticosteroids after 1-year follow-up. Among TCM users, the exposure to any corticosteroids was lower (42.1% reduction in TCM users versus 34.5% increase in TCM non-users, relative risk: 0.36;  $p<0.001$ ), the duration was shorter (relative risk for using corticosteroid more than 14 days: 0.37;  $p<0.001$ ), and the rate of frequent visits with steroid prescription was also lower.

**Conclusion:** Lower use rate of corticosteroid can be found after TCM treatment, which can be considered as an integrative therapy for atopic dermatitis.

#### **Combination of flying needle with Chinese Herbal Medicine in the treatment of Atopic dermatitis: A clinical trial** *Pak J Pharm Sci* 2014;27(5 Suppl):1687-1690.

A single-center, prospective, randomized clinical design was conducted. The curative effect of the combination of Chinese herbal medicine and acupuncture for the treatment of Atopic dermatitis was assessed. Thirty (30) patients were treated with Flying Needle and Chinese herbal medicine. Because of personal reasons, one (1) dropped out. The patients accepted Flying Needle treatment 3 times a week and the internal medicine 3 times daily for in all 12 weeks. Before treatment, and after treat 4, 8 and 12 weeks, assessments were performed. After treat 12 weeks, all patients of SCORAD score were dropped, with the mean SCORAD score declining to  $19.58\pm 12.21$ . The recovery and removal rate comparison ( $p<0.05$ ). There are no side effects. The results hint that combine Flying Needle with Chinese herbal medicine are benefit on patients with atopic dermatitis and the effectiveness may better than oral medicine alone.

#### **Efficacy of a novel herbal multicomponent traditional Chinese medicine therapy approach in patients with atopic dermatitis**

*Forschende Komplementärmedizin (Research in complementary medicine)* 2013;20(3):189-196.

**Background:** In Western medicine, the application of topical steroids and oral antihistaminic or antiallergic agents is the main treatment option for atopic dermatitis (AD). However, instead of these therapies the disease may remain intractable in some patients, resulting in long-term exposure to these chemical agents and consequently leading to concerns about possible adverse drug reactions.

**Methods:** In the present open-label clinical study, the efficacy and safety of a novel multi component TCM therapy approach for AD was investigated. Therefore, 94 patients received the formula I (10 crude drugs) orally, combined with both the lotion II (7 crude drugs), and the ointment III (8 crude drugs). Each crude drug was extracted with boiling water in a defined manner, concentrated, and reworked into the preparations. Standardized scores were used for evaluating the severities of AD (clinical severity 0-4) and pruritus (pruritus score 0-4).

**Results:** Both scores had significantly improved at the end of a 12 month treatment ( $p < 0.001$ ). Eosinophil ratio and serum IgE levels, which were elevated in AD patients, were significantly reduced at the end of therapy ( $p < 0.01$ ). In 32 of 94 treated patients the condition markedly improved, in 59 cases AD improved, and in 3 patients there was a slight improvement with no case of ineffective treatment. There was no hint of renal or hepatic toxicity or any other adverse effects.

**Conclusion:** The present study confirms that the 3 newly developed herbal TCM combination preparations are clinically efficacious on atopic dermatitis, accomplishing a significant reduction in both clinical and pruritus scores as well as in eosinophil ratios and serum IgE levels.

**Prospective self-controlled trial of the efficacy and tolerability of a herbal syrup for young children with eczema**  
*Journal of Dermatological Treatment* 2012;23(2):116-121.

**Background:** Traditional Chinese medicine (TCM) is popular as an alternative medicine in children with atopic dermatitis (AD). A concoction of five herbs in a capsular preparation has been confirmed to be efficacious in improving the quality of life and sparing topical corticosteroid usage. We evaluated the clinical efficacy and tolerability of the same concoction in syrup form.

**Methods:** This was a prospective self-controlled trial set in the pediatric dermatology clinic of a teaching hospital. Children aged 4-7 years with moderate-to-severe AD received 20 ml of TCM syrup daily. Clinical parameters and laboratory markers were measured before and at 2 weeks, 7 weeks and 12 weeks of treatment, and at 4 weeks after completion. Disease severity was evaluated by the SCORing Atopic Dermatitis (SCORAD) index and quality of life by the Children's Dermatology Life Quality Index (CDLQI). Blood was obtained for a complete blood count, total IgE, eosinophil count, and biochemical studies prior to and after 3 months of TCM usage.

**Results:** Twenty-two patients participated in the study. There were significant improvements in the objective SCORAD, pruritus and CDLQI scores 4 weeks after study completion. There was no change in sleep score or amount of topical steroid consumption. No biochemical evidence of any adverse drug reaction was observed during the study period. The TCM syrup was generally palatable and well tolerated by the children. Adverse effects were generally mild but two patients with rash withdrew during the study.

**Therapeutic effect and safety of a traditional Chinese medicine for atopic dermatitis in children: a randomized, double-blind, placebo-controlled study**  
*Hong Kong Medical Journal* 2011;17 Suppl 2:38-40.

The traditional Chinese medicine concoction using five herbs was palatable and well tolerated and was efficacious in reducing topical corticosteroid usage in children with moderate-to-severe atopic dermatitis. [Click here for original paper.](http://www.hkmj.org/system/files/hkm1102sp2p38.pdf) (<http://www.hkmj.org/system/files/hkm1102sp2p38.pdf>)

**Efficacy and safety of a Chinese herbal product (Xiao-Feng-San) for the treatment of refractory atopic dermatitis: A randomized, double-blind, placebo-controlled trial**  
*International Archives of Allergy and Immunology* 2011;155(2):141-8.

**Background:** Severe and widespread atopic dermatitis often fails to respond adequately to topical steroids and oral antihistamines and requires immunomodulatory drugs which, although effective, have undesirable toxic effects.

**Methods:** In this prospective, randomized, double-blind, placebo-controlled trial, 71 patients with severe intractable atopic dermatitis were given an 8-week treatment with oral Xiao-Feng-San (XFS; 47 patients) or placebo (24 patients). Total lesion score, erythema score, surface damage score, pruritus score and sleep score were measured at 4-week intervals.

**Results:** Fifty-six patients completed both the treatment and follow-up periods. The decrease in the total lesion score in the treatment group at 8 weeks was significantly greater than that of the placebo group ( $79.7 \pm 5.8\%$  vs.  $13.5 \pm 7.64\%$ ;  $p < 0.001$ ). There was also a statistically significant difference between the treatment and placebo groups with regard to erythema, surface damage, pruritus and sleep scores. The difference between the 2 groups was still significant for all outcome measures except the erythema score at the 12-week follow-up, 4 weeks after the 8-week treatment had ended. Patients reported no side effects from treatment, although some commented on the unpalatability of the medication.

**Conclusion:** Our study results suggest that the traditional Chinese herbal medicine XFS may be an alternative choice of therapy for severe, refractory, extensive and nonexudative atopic dermatitis.

**Effectiveness of combined Chinese herbal medicine and acupuncture in the treatment of atopic dermatitis**  
*Journal of Alternative and Complementary Medicine* 2008;14(8):1043-1048.

**Objective:** The objective of this study was to assess the effectiveness of the combination of Chinese herbal medicine and acupuncture for the treatment of atopic dermatitis.

**Methods:** Twenty (20) patients between the ages of 13 and 48 who had mild-to-severe atopic dermatitis were given a combined treatment of acupuncture and Chinese herbal medicine and were followed prospectively. The patients received acupuncture treatment twice a week and the Chinese herbal formula 3 times daily for a total of 12 weeks. Assessments were performed before treatment, and at weeks 3, 6, 9, and 12 of treatment. The primary outcomes were defined as the changes in the Eczema Area and Severity Index (EASI), Dermatology Life Quality Index (DLQI), and patient assessment of itch measured on a visual analogue scale (VAS).

**Results:** After 12 weeks of treatment, an improvement in EASI was noted in 100% of patients, when compared with the baseline. The mean EASI fell from 4.99 to 1.81; the median percentage of decrease was 63.5%. Moreover, 78.8% of patients experienced a reduction in DLQI and VAS, as compared with the baseline. The mean DLQI decreased from 12.5 to 7.6 at the end of treatment, with 39.1% improvement. Mean VAS decreased from 6.8 to 3.7, with 44.7% improvement. No adverse effects were observed.

**Conclusion:** The results of this study suggest that the combination of acupuncture and Chinese herbal medicine have a beneficial effect on patients with atopic dermatitis and may offer better results than Chinese herbal medicine alone.

#### **Efficacy and tolerability of a Chinese herbal medicine concoction for treatment of atopic dermatitis: a randomized, double-blind, placebo-controlled study**

*British Journal of Dermatology* 2007;157(2):357-363.

**Objective:** To assess the efficacy and tolerability of the concoction in children with AD.

**Methods:** Following a 2-week run-in period, children with long-standing moderate-to-severe AD were randomized to receive a 12-week treatment with twice-daily dosing of three capsules of either TCHM or placebo. The SCORing of Atopic Dermatitis (SCORAD) score, Children's Dermatology Life Quality Index (CDLQI), allergic rhinitis score, and requirement for topical corticosteroid and oral antihistamine were assessed before and at weeks 4, 8, 12 and 16 after treatment. Adverse events, tolerability, haematological and biochemical parameters were monitored during the study.

**Results:** Eighty-five children with AD were recruited. Over 12 weeks, the mean SCORAD score fell from 58.3 to 49.7 in the TCHM group (n=42; p=0.003) and from 56.9 to 46.9 in the placebo group (n=43; p=0.001). However, there was no significant difference in the scores at the corresponding time points between the two groups. The CDLQI in TCHM-treated patients was significantly improved compared with patients receiving placebo at the end of the 3-month treatment and 4 weeks after stopping therapy (p=0.008 and 0.059, respectively). The total amount of topical corticosteroid used was also significantly reduced by one-third in the TCHM group (p=0.024). No serious adverse effects were observed between the groups.

**Conclusion:** The TCHM concoction is efficacious in improving quality of life and reducing topical corticosteroid use in children with moderate-to-severe AD. The formulation was palatable and well tolerated.

#### **A pentaherbs capsule as a treatment option for atopic dermatitis in children: an open-labeled case series**

*American Journal of Chinese Medicine* 2004;32(6):941-950.

Traditional Chinese Medicine (TCM) has been used in patients with atopic dermatitis (AD), but its therapeutic effects are debatable. We evaluated the clinical and biochemical effects of a TCM capsule (PentaHerbs capsule) in children with AD. After a run-in period of 4 weeks, children old enough to manage oral medication were admitted and their disease severity was evaluated by the SCORing Atopic Dermatitis (SCORAD) index. Blood was obtained for complete blood count, total and allergen-specific immunoglobulin E (IgE), biochemical studies and inflammatory markers of AD severity [serum cutaneous T cell-attracting chemokine (CTACK), macrophage-derived chemokine (MDC), thymus and activation-regulated chemokine (TARC) and eosinophil cationic protein (ECP)] prior to, and after 3 months of, TCM use. Three PentaHerbs capsules twice a day were prescribed for 4 months. Patients were followed monthly to ensure compliance, and SCORAD scores were obtained at each visit. Five boys and four girls participated in the study. All patients had detectable food or inhalant-specific IgE in serum. There was significant improvement in the overall and component SCORAD scores. There were no significant differences between the pre- and post-treatment values of the serum CTACK, MDC, TARC and ECP levels but CTACK showed a decreasing trend (p=0.069). No clinical or biochemical evidence of any adverse drug reaction was observed during the study period. The PentaHerbs capsules were well tolerated by the children and apparent beneficial effects were noted clinically.

#### **Modulation by Chinese herbal therapy of immune mechanisms in the skin of patients with atopic eczema**

*British Journal of Dermatology* 1997;136(1):54-59.

Ten patients with atopic eczema (AE) received treatment with Chinese herbal therapy (CHT; Zemaphyte) for 2 months. The severity of the eczema was recorded and skin biopsies were taken from lesional (L) and non-lesional (NL) skin before and after treatment. The skin biopsies were stained to detect T-cell subsets (CD4, CD8, CD45Ro and CD25), macrophage subsets (RFD7), dendritic cells (RFD1), Langerhans cells (CD1), HLA-DR, low-affinity IgE receptors (CD23) and high-affinity IgE receptors (15A5, 22H7). A quantitative assessment of the numbers of positively stained cells was made. Monoclonal antibody binding specifically to CD23 (Fc epsilon RII) was used, in combination with cell subset monoclonal antibodies to quantify the cellular distribution of CD23 antigen in the skin. Following 2 months of treatment with CHT, erythema was reduced by 53%. There was also a significant reduction in HLA-DR expression. The numbers of RFD1 + CD23 +, RFD7 + CD23 +, CD1 + CD23+ and CD25 + cells in lesional skin decreased significantly after treatment (RFD1 + CD23 + from 0.39 to 0.21, RFD7 + CD23 + from 0.29 to 0.16, CD1 + CD23 + from 0.24 to 0.09, CD25 + from 0.84 to 0.31 in epidermis and from 1.62 to 0.94 in dermis (mean cells numbers per unit area). No significant change in cell numbers in NL skin or expression of Fc epsilon RI in either L or NL samples was observed after treatment. This study confirms that Chinese herbal therapy is clinically efficacious and that clinical improvement is associated with a significant reduction in antigen-presenting cells expressing CD23.

#### **Efficacy of traditional Chinese herbal therapy in adult atopic dermatitis**

*Lancet* 1992;340(8810):13-17.

There has been considerable interest in traditional Chinese herbal therapy (TCHT) as a new treatment for atopic dermatitis. To establish the efficacy and safety of this treatment, a daily decoction of a formula containing ten Chinese herbs that has been found to be beneficial in open studies was tested in a double-blind placebo-controlled study. 40 adult patients with longstanding, refractory, widespread, atopic dermatitis were randomized into two groups to receive 2 months' treatment of either the active formulation of herbs (TCHT) or placebo herbs, followed by a crossover to the other treatment after a 4-week washout period. The main outcome measures were extent and severity of erythema and surface damage as judged by standardized body scores. The patients' own assessments of the overall response to treatment were also sought. The geometric mean score for erythema at the end of active treatment was 12.6 (95% confidence interval [CI] 5.9 to 22.0) and at the end of the placebo phase was 113 (65 to 180). The geometric mean score for surface damage was 11.3 (5.8 to 21.8) and 111.0 (68 to 182), respectively. The 95% CI for the mean geometric ratio for the two values with active treatment was 0.04 to 0.22 for erythema ( $p < 0.0005$ ) and 0.04 to 0.27 for surface damage ( $p < 0.0005$ ). Of the 31 patients who completed the study and expressed a preference, 20 preferred that phase of the trial in which they received TCHT whereas 4 patients preferred placebo ( $p < 0.02$ ). There was a subjective improvement in itching ( $p < 0.001$ ) and sleep ( $p < 0.078$ ) during the TCHT treatment phase. No side-effects were reported by the patients although many commented on the unpalatability of the decoction. TCHT seems to benefit patients with atopic dermatitis.