



Case Report: Treating Atopic Dermatitis with Si-Wu-Xiao-Feng Decoction in combination with Topical Huang Qin Cream

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ABSTRACT

The aim of this study is to evaluate the efficacy of treating Atopic Dermatitis with the Traditional Chinese Medicine (TCM) Formula of Si-Wu-Xiao-Feng decoction in combination with Topical Huang Qin Cream. The case report is from a 42 years old female patient presented with lesions of small blisters bilaterally spread all over her arms and legs. The blisters often become very itchy and has affected the patient for over 5 years. The blisters became more severe during the past 2 months. She is prescribed Si-Wu-Xiao-Feng decoction to drink daily 30 minutes after breakfast and dinner. The TCM herb composition of the Si-Wu-Xiao-Feng Decoction is adjusted after each follow up according to the severity and condition of the blisters. She is also prescribed a Topical Huang Qin Cream. This is an extemporaneous formulation prepared by the Institute of Thai-Chinese Medicine Mae Fah Luang University. After 6 months of treatment, the lesions of blisters, papules and scaly skin has recovered back to normal skin. After treatment was discontinued, the patient was followed up at 2 weeks and shown no eruption of blisters or signs of itchiness. Moreover, the patient liver and kidney function were measured at the 3rd month during the treatment. All parameters were within normal range. In conclusion, treating Atopic Dermatitis with the combination of Si-Wu-Xiao-Feng decoction and Topical Huang Qin Cream has shown good efficacy. It also shown potential in preventing the recurrence of the disease and is safe for the patient. This treatment regimen should be studied in a wider clinical setting for developing new treatments for Atopic Dermatitis patients in the future.

Keywords: Atopic Dermatitis; Chinese Medicine; Huang Qin; Si Wu Xiao Feng Decoction

Introduction

Atopic Dermatitis is a chronic skin disease which is commonly found in children. The main clinical features are itchy, dry scaly skin which recurs periodically [1]. It is considered a common non-communicable disease. It is reported to occur worldwide with a prevalence of 20% in children and 2-8% in adults. Symptoms often develop in children. In severe cases the symptoms persist into adulthood [2,3]. It can be categorized into 2 type which are intrinsic type or the non-igE associated and the extrinsic type of the igE associated. Patient of the latter type are shown to have

high serum igE levels and have a positive skin prick test [4]. According to TCM, Atopic Dermatitis is known as Shi Chuang (湿疮). There are many etiologies of Shi Chuang such as a congenital physical imbalance and inappropriate eating routine. Consuming certain types of food such as spicy food and meat can increase the heat in the body which affects the function of the stomach and spleen. This can cause imbalance in digestion, nutrient absorption and nutrient dissemination which increases the heat and dampness in the body. Moreover, the body is also exposed to wind which is an external factor. When the wind, heat and dampness (external and

internal factors) spreads into the skin the disease will exacerbate [5]. According to TCM, Atopic Dermatitis can be categorized into 3 types of syndrome [6] are as followed:

1. dampness-heat syndrome clinical feature: acute lesion: erythema, swelling, wheal, itchiness most of the time, blisters with fluid leakage upon rupture concurrent symptoms: tachycardia, thirsty, hard stool, yellow urine, redness color of tongue, yellow and sticky plaque on tongue, rolling pulse

2. spleen deficiency and dampness retention syndrome

clinical feature: slow progression of the disease

lesion: mostly are papules and vesicles with darken and pale spots, scaly skin, itchiness, minimal fluid leakage upon rupture from scratching

concurrent symptoms: loss of appetite, loose stool, polyuria with clear or light-yellow color, pale tongue, white or sticky plaque on tongue, soggy pulse

3. Blood-deficiency and wind-dry syndrome

clinical feature: long progression of the disease with on and off episodes

lesion: lichenification, severe itchiness, scaly skin, small erythema rashes

concurrent symptoms: pale tongue, thin plaque on tongue, thready pulse

The treatment regimen of the formula and herb ingredients are adjusted according to the syndrome and concurrent symptoms of the patient at each visit.

Si Wu Xiao feng Decoction [7] is a TCM formula for treating chronic Atopic Dermatitis or the common syndromes of Blood-deficiency and wind-dry syndrome. It has shown to have good efficacy. The main properties are nourishing blood, increase dampness, remove wind and reduce itchiness. The ingredients are as followed:

1. Monarch drug (jun yao): *Rehmannia glutinosa* (Gaertn.) Libosch. ex Fisch. et Mey. – reduce heat, cools the blood and nourish yin; *Angelica sinensis* (Oliv.) Diels and *Ligusticum chuanxiong* hort – nourishing blood, improve circulation and harmonizes yingfen and weifen.

2. Ministerial drug (chen yao): *Saposhnikovia divaricata* (Turcz.) Schischk, *Nepeta cataria* L. and *Heracleum hemsleyanum* Diels in combination – remove wind and reduces dampness for reducing external factors and reduces itchiness; *Cryptotympana pustulata* Fabricius and *Mentha haplocalyx* Briq. – remove wind, provokes rash and reduces itchiness.

3. Adjuvant drug (zuo yao): *Polygonum multiflorum* Thunb. - nourishing liver and kidney, tonifying and replenishing blood and essence, enrich yin; *Cannabis sativa* L. - moistening dryness and simulate the circulation of blood. These 2 herbs can potentiate the monarch drug in nourishing yin and blood; *Dictamnus dasycarpus* Turcz. – reduces heat and dampness, eliminates the dampness in the skin; *Paeonia*

lactiflora Pall. – nourishing blood and harmonizes yingfen and weifen

Huang Qin Cream is an extemporaneous topical cream for treating skin conditions which is prepared and used exclusively by the Institute of Thai-Chinese Medicine Mae Fah Luang University Hospital. The main indication is for skin rash with inflammation and itchiness which are a non-infectious cause. The main herb ingredient of *Scutellaria baicalensis* Georgi. is shown to have many biological properties such as fatigue reduction, antibacterial, anti-inflammatory and immunomodulation [8]. Other ingredients of Vaseline, glycerin and lanolin have moisturizing effects.

Case Report

1st visit: 42 years old female patient came to the General Medicine Department of the Institute of Thai-Chinese Medicine Mae Fah Luang University Hospital. Patient has a history of Atopic Dermatitis with on and off episodes since 2016. Patient had received treatment from a dermatological clinic with a type of injection, oral antihistamine and topical medications. The skin rash and itchiness were relieved after the treatment but exacerbated after exposure to external stimulants. In this visit, patient has lesions of small blisters bilaterally spread all over her arms and legs. The itchiness is very severe in the ankle area. She has had these symptoms for over 3 months and it has become severe during the past month. Patient reported to have a underlying disease of allergic rhinitis. Patient reports no severe disease, history of surgery, drug allergy, consumption of alcoholic beverages, smoking and family history of any severe diseases.

Physical examination of the rash on both arm and legs showed erythema rash with some darken spots. Prolonged rash mostly became dry, scaly, swelling and thick. Some of the newly erupted rashes are blisters with minimal fluid leakage. Most rashes are itchy but within tolerable limits. Itchiness is increased after consumption of spicy food, exposed to hot weather and increased sweating. Patient often feels thirsty and prone to cold sores but has low consumption of water. Normal diet and normal bowel movement. Difficulty sleeping and increased itchiness during her sleep cycle. She often feels fatigue after waking up. Tongue has reddish color with a thick white plaque. LMP 26.6.2564*6 days with normal amount, reddish color, minimal blood clots and no menstrual pain.

Diagnosis:

Conventional medicine - Atopic Dermatitis (Chronic Stage)

TCM - Shi Chuang (Blood-deficiency and wind-dry syndrome)

Treatment: aim to nourish the blood, increase dampness, expel wind and reduce the itchiness. Oral medicine is the modified Si-Wu-Xiao-Feng decoction and topical medicine is the Topical Huang Qin Cream.

Modified Xiao-Feng decoction should be taken 30 minutes after meal. Take 180 ml per dose after breakfast and dinner. Duration 7 days.

Topical Huang Qin Cream should be used after bath in the morning and evening or when itchiness increases. Duration 7 days.

Follow up is after 7 days of the current visit and advised to avoid spicy food, oily food, salty food and fried food. Get enough rest and exercise regularly.

2nd visit: After using the oral and topical medicine for 1 week, patient reported no side effects from the medication. Newly erupted blisters on the arm and leg are still present with tolerable level of itchiness. Itchiness increases with hot weather or when excess sweating. Diet and bowel movement is normal. Falling asleep and sleeping duration improved. Dry mouth but reduces thirstiness. Tongue is pale red with thick white plaque. Small pulse.

Diagnosis reveal that the patient has newly erupted rash due to the increase heat according to TCM. Therefore, the herb ingredient *Paeonia suffruticosa* Andr. Was added into the modified Xiao-Feng decoction formula to help clear heat and cool the blood. Topical Huang Qin Cream was prescribed like before. Duration of the treatment regimen is 14 days and follow up was appointed after 2 weeks.

3rd Visit: After the treatment, patient showed to have no new eruption of the blister rash. The recovered rash are mostly dried out but felt to have good moisture. Itchiness is increased especially during night time. Sleeping pattern disturbed due to the itchiness. Diet and bowel movement is normal. Tongue is pale red with thick white plaque. Small pulse.

The herb ingredient *Tribulus terrestris* L. was added to help expel wind and reduce itchiness. While the herb ingredient *Nepeta cataria* L. was removed from the modified Xiao-Feng decoction. Topical Huang Qin Cream was prescribed like before. Duration of the treatment regimen is 14 days and follow up was appointed after 2 weeks.

Now the patient is at the 1 month of the treatment. No new rash eruption was reported. Previous papule rashes are now thinner and most of the darken spot have become lighter. Itchiness has reduced with some areas of dry skin. Patient reported that the topical Huang Qin cream can completely reduce the itchiness. Other vital signs are normal. Afterwards, the modified Xiao-Feng decoction composition are adjusted according to the syndrome at each visit which the patient is appointed for follow up every 2 weeks.

After 3 months of the treatment, the patient's liver and kidney function was measured. Laboratory results showed that AST = 17 U/L, ALT 18 U/L, ALP 61 U/L, BUN 10.7 mg/dL and Creatinine 0.8 mg/dL. All parameters were within normal limits therefore the treatment with TCM medications was allowed to continue.

After 6 months of the treatment with modified Xiao-Feng Decoction and Topical Huang Qin Cream, patient's symptoms have gradually recovered. No new rash eruption. Previous darken papules have become thinner and lighter. No itchiness. Therefore, the treatment was discontinued. Discharge advices were to avoid spicy food, oily food, salty food and fried food because they can increase heat in the body. Avoid any known allergy stimulant. Get enough rest and exercise regularly.

Telemedical followed up after the discontinuation of the treatment at 2 and 4 weeks. Patient reported no new rash eruption and no disturbance in her daily life.

Discussion

According to TCM, Atopic Dermatitis (Chronic Stage) can be categorized into spleen deficiency and dampness retention syndrome and Blood-deficiency and wind-dry syndrome [9]. The patient in this case has a long progression of the disease. Lesions are erythema and papule rash with some darken spots. Severe itchiness. Area of the elevated skin in the rash are harden and scaly. Tongue is pale and pulse is small. These symptoms correlate with the condition of Shi Chuang with the blood-deficiency and wind-dry syndrome. The etiology of this condition is caused by the chronic nature of the disease. Heat-dampness stagnation inside the body, dampness stagnation which causes blood stagnation which is combined with the heat inside the body [10]. This contributes to the intense stagnation of heat, dampness and blood stagnation in the later stage. The wind and heat destroys the Yin. This causes the dampness stagnation that obstructs the Luo meridian and reduce the blood circulation to the skin. These all contribute to the blood-deficiency and wind-dry syndrome. According to TCM, the treatment for Shi Chuang with the blood-deficiency and wind-dry syndrome must enrich blood, moisten dryness, expel wind and stop itchiness. In this case the researcher uses the TCM formula of Si-Wu-Xiao-Feng decoction as the main medication. In case of severe itchiness which disturbs the sleeping pattern, the herb ingredient *Ostrea gigas* Thunberg and *Hyriopsis cumingii* (Lea) was added. If there is blood stagnation, the herb ingredient *Salvia miltiorrhiza* Bge and *Corydalis yanhusuo* W. T. Wang was added. If the dampness is high, the herb ingredient *Dioscorea tokoro* Makino is added. If wind is high, *Tribulus terrestris* L. is added [11]. Oral treatment is not only a part of treatment for this disease. There are other treatments such as herbal paste, herbal shower or soaking, moxibustion, fire-needle therapy, acupuncture, cowherb attachment on earlobe, injection according to acupuncture point and blood pricking and cupping [12]. Behavioral adjustment is also an important part of the patient treatment plan. TCM doctors should advise patients to consume food with minimal seasonings. Avoid spicy food, fried food and other food that can

cause cold sore. Avoid foods that are known to cause allergy such as seafood and fermented food. Avoid tea and coffee.

Conclusion

This case report has demonstrated the effectiveness of the diagnosis and treatment of Atopic Dermatitis (Chronic Stage) according to TCM. TCM doctor must be able to provide a correct differential diagnosis of the condition or syndrome of the disease. The next important point is the selection of an appropriate TCM formula must be selected with adjustment of the herb ingredient amount and composition according to the dynamic of the disease condition throughout the treatment plan. Improper adjustment, such as non-compatible formula or using the herb ingredient in subtherapeutic or suprathreshold levels, can greatly affect the efficacy of the treatment or even cause undesired adverse effects. This would also be a burden on the patient in terms of medical cost. Treating Atopic Dermatitis (Chronic Stage) with TCM requires a long period of time and the patient must have good discipline and patience during the treatment plan. The results of the treatment is a reduction in the exacerbation of the disease, relief from the chronic skin lesions and these treatment also have minimal side effects on the major metabolic organs. However, this is a single patient study. To improve this treatment regimen, a clinical study in a larger population is required. Moreover, pharmacological studies on the efficacy of Si-Wu-Xiao-Feng decoction for treating Atopic Dermatitis (Chronic Stage) should be investigated. These data are essential for developing new clinical standards for the treatment of Atopic Dermatitis (Chronic Stage) with TCM in Thailand in the future.

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