

Effect of Selected Traditional Medicine Therapy on Patients with *Vicharchika* with Special Reference to Atopic Eczema

Lwin Lwin Than^{1*}, Thein Hteik², Khin Yadana Hlaing²,
Naw Zar Aung Thin³, Myo Yin Mon Htwe² & Aung Kyaw Min²

¹Traditional Medicine Factory (Mandalay)

²University of Traditional Medicine (Mandalay)

³University of Medicine (Mandalay)

Atopic eczema is a common, chronic, relapsing, inflammatory skin disease and is similar to *Vicharchika* in *Ayurvedic* Medicine. This study was conducted to evaluate the effect of Selected Traditional Medicine Therapy (STMT) on *Vicharchika*. Selected Traditional Medicine Therapy is a conservative treatment. It includes oral medicines (Traditional Medicine Formulation (TMF)-15, TMF-27 and TMF-12), cleansing solution (*Anu.-Mju-Hpan-Hsei*) and external application (*triphala* and honey ointment). In this study, 25 patients were selected by consecutive sampling method according to inclusion and exclusion criteria. It was carried out by before and after interventional study design from 1st November 2019 to 31st October 2020. The patients were taken STMT for 60 days. Oral medicines were taken 3 times daily for 60 days. Cleansing solution and external application was taken 2 times daily for 60 days. The patients were assessed by using Eczema Area and Severity Index score- EASI (erythema, papulation, excoriation and lichenification) as well as Traditional Medicine score (pruritus, burning sensation, dryness, oozing, discoloration and thickening of skin). Clinical presentations of patients were recorded on day 0, day 15, day 30, day 45 and day 60. The percent relief of overall effect of STMT on clinical presentations according to EASI score was 84.82% and it was statistically significant ($p < 0.001$). Furthermore, the percent relief of overall effect of STMT on clinical presentations according to Traditional Medicine score was 73% and it was statistically significant ($p < 0.001$). Thus, this study was prominently effective on atopic eczema after treatment. In addition, there was no side effect throughout the study period. Therefore, Selected Traditional Medicine Therapy is a reliable treatment on *Vicharchika*.

Keywords: Atopic eczema, *Vicharchika*, Eczema Area and Severity Index score, Traditional Medicine score, Selected traditional medicine

INTRODUCTION

Atopic eczema is one of the types of eczema and is similar to *Vicharchika* in *Ayurvedic* Medicine. It is a skin ailment characterized by dark pigmentation, linear rough lesion, intense itching and dryness.¹ Adult-onset of atopic eczema is a broad range varying from 18 to 71 years.² According to hospital data of Traditional Medicine Teaching Hospital (TMT), Mandalay, the prevalence age of

eczema patients on 2016-2018 was in the range of 12-85 years. In Ulcer and Sore Therapy Ward of TMT, Mandalay, the commonly used Traditional Medicines on eczema patients are (Traditional Medicine Formulation) TMF-6, TMF-12, TMF-15, TMF-27 as oral medicine, TMF-6, TMF-21,

*To whom correspondence should be addressed.

Tel: +95-9-259399315

E-mail: lwinthan1402@gmail.com

DOI:

Hpa- Jaun:-Gje'-Njou ointment, *triphala* & honey paste as external application and *Anu.-Mju-Hpan-Hsei*., and *triphala* as *Hpan-Hsei*: (cleansing solution). In this study, patients with *Vicharchika* were treated by using Selected Traditional Medicine Therapy (STMT). STMT means that conservative treatment and it includes TMF-15, TMF-27, TMF-12 as oral medicines, *triphala* & honey paste as external application and *Anu.-Mju-Hpan-Hsei*: as cleansing solution.

According to Traditional Medicine concept, TMF-15 has cold, sweet, bitter and astringent tastes. Cold quenches *Ushna Tejo* (element of fire). Sweet, bitter and astringent enhance *Pathivī* (element of earth) and quenche *Vāyo* (element of air). TMF-15 relieves on insomnia, pitta disorders and *Ushna Tejo* (element of fire) disorders.³ TMF-15 is for good skin complexion by pacifying heat.⁴ In clinical practice, it has been using in skin diseases. Especially, it relieves intense itching that disturbs sleep. Furthermore, TMF-27 has hot, bitter, and astringent tastes. It balances the functions of *Vāyo*. *Tinospora cordifolia*, the greatest proportion in TMF-27 has anti-inflammatory, anti-allergic, anti-pyretic, and anti-diabetic activity.⁵ In clinical practice, TMF-27 has been using combined with TMF-15 in the treatment of skin diseases in TMTH, Mandalay. Main therapeutic indications of TMF-12 are eczema and rashes associated with impurity of blood.⁶ In clinical practice, TMF-12 has been using in different kinds of ulcers and wounds, various skin diseases and ano-rectal diseases.

Triphala has wound healing, antibacterial, antifungal, anti-inflammatory, anti-ulcerogenic and immune-modulatory activities.⁷ It is a good astringent that has cleaning property, hamper oozing of wound by shrunken action and does not have side effects such as itching, allergy and blisters.⁸ Traditionally, honey has been used as topical agent on wounds and skin infections due to the action of astringent, cellular proliferation and wound healing activity.⁹ Cleansing solution is used to clean blood, pus and impurities from the ulcers and wounds, to promote wound healing, to keep away foul smell and

to get the functioning of *Ākāsa*.¹⁰ *Anu.-Mju-Hpan-Hsei*: is effective on ulcers and wounds as *Hpan-Hsei*: (cleansing solution).¹¹ In clinical practice, *Anu.-Mju-Hpan-Hsei*: has been using in different kinds of ulcers and wounds, various skin diseases and ano-rectal diseases and it is actually effective.

Traditional Medicine Formulations (TMFs) included in STMT has been using in the patients with skin diseases in TMTH, Mandalay. It is an experience-based treatment on skin diseases including eczema. Therefore, the aim of this study was to determine the effect of Selected Traditional Medicine Therapy on patients with *Vicharchika* with special reference to Atopic Eczema.

Moreover, the effect of treatment was assessed by EASI score and Traditional Medicine score in this study. EASI focuses on the key acute and chronic signs of inflammation (i.e erythema, induration/population, excoriation, and lichenification) and excludes non-key as well as subjective parameters.¹² Traditional Medicine score was quoted from the research paper, “Aragwadha (Cassia fistula) - A Miracle drug in the Management of *Vicharchika* (Eczema)”, the clinical assessments of *Vicharchika* are *Kandu* (pruritus), *Daha* (burning sensation), *Ruksha* (dryness), *Srava* (oozing), *Vaivaranyata* (discoloration) and *Raji* (thickening of skin).¹³

MATERIALS AND METHODS

Study period and study population

This study was carried out from 1st November 2019 to 31st October 2020 in 25 patients with atopic eczema above 18 years attending 100-bedded Traditional Medicine Teaching Hospital, Mandalay.¹³ Atopic eczema patients with known case of diabetes mellitus were excluded from the study.

Study design

Before and after interventional study

Preparation of medicines

The ingredients of TMF-15, TMF-27, TMF-12, *Anu -Mju-Hpan-Hsei*: and the equal ratio

of *triphala* were collected from traditional medicine shop at Zay-Cho Market, Mandalay. All ingredients of TMF-15, TMF-27, TMF-12, *Anu.-Mju-Hpan-Hsei*: and the equal ratio of *triphala* were cleaned and dried in sun light. TMFs were prepared separately into powder form by using grinding machine. All TMFs were kept separately in the bottles and put in cool and dried place.

After that, TMF-12 powder was mixed with tapioca starch to make tablet form. Then, it was dried in tray dryer. And then, it was granulated by granulator and made into tablets form by using tableting machine at Traditional Medicine Factory, Mandalay. Average weight for each tablet is 400 mg. The tablets were kept in the bottle and put in cool and dried place. It took four days to complete this preparation of medicine.

Treatment procedure

This study was conducted after being approved by Institutional Review Board (IRB), University of Traditional Medicine (UTM) and the following reasons were considered as ethical for human research. Patients were selected in accordance with inclusion criteria and exclusion criteria by taking informed consent. Then, history taking, physical examination and local examination were done by pro forma. The clinical presentations of the patients were recorded before treatment (day 0). The patients were given Selected Traditional Medicine Therapy. The patients were taken oral medicines: 2 g of TMF-15 powder and 2 g of TMF-27 powder with water for two times (at 8 am and 12 am) and 2 g of TMF-12 with water at bed time daily for 60 days.

For external application, the affected area was cleaned with *Anu.-Mju-Hpan-Hsei*: solution and then *triphala* and honey paste (2:1) was applied on the affected area, twice daily for 60 days. During study period, the patients were followed up and assessed 4 times (on day 15, day 30, day 45 and day 60) by EASI score (erythema, papulation, excoriation and lichenification) as well as Traditional Medicine score (pruritus, burning sensation,

dryness, oozing, discoloration and thickening of skin).

Data collection and data analysis

Data was collected by using EASI score and Traditional Medicine score systematically shown in pro forma. The result data was recorded by using Microsoft Excel 2013 and data was analyzed by using Statistical Package for the Social Science (SPSS version 25). Paired t test was used for comparing data.

Ethical consideration

There were no extra risks and no financial gain for the patients in this study. According to the study by Department of Medical Research, TMF-12 and TMF-15 have no toxic effect where the median lethal doses (LD₅₀) limits on mice, rat and rabbits being greater than 3.2, 1.6 and 0.8 g/kg, respectively and TMF-27 has no toxic effect where the median lethal doses (LD₅₀) limits on mice, rats and rabbits being greater than 4.8, 2.4 and 1.2 g/kg, respectively.⁶ The patients were allowed to withdraw from the study at any time. The whole process was done under the guidance of supervisors.

RESULTS

Demographic characteristics of patients

Among 25 cases, eight patients (32%) were under 40 years and 17 patients (68%) were over 40 years. Seven patients (28%) were male and 18 patients (72%) were female. As regards regional distribution of the atopic eczema in body, atopic eczema were occurred at lower extremities in maximum 23 patients (92%), at upper extremities in one patient (4%) and at the region of head & neck in one patient (4%). In type of eczema, more than half of patients (60%; 15/25) had sub-acute type of eczema. Concerning family history of atopic eczema, twelve patients (48%) had family history, 13 patients (52%) had no of family history of atopic eczema. Regarding the history of other atopic diseases, there was seven patients with a history of asthma, one patient with a history of rhinitis and the rest did not have history of other atopic disease.

Effect of Selected Traditional Medicine Therapy on clinical presentations of atopic eczema

According to EASI score, patients who had erythema were 17 patients (68%) with grading score 27 on day 0, 14 patients (56%) with grading score 19 on day 15, 13 patients (52%) with grading score 15 on day 30, 8 patients (32%) with grading score 8 on day 45 and 4 patients (16%) with grading score 4 on day 60, respectively.

All patients (100%) got papulation with grading score 58 on day 0, and with grading score 46 on day 15, 24 patients (96%) with grading score 37 on day 30, 22 patients (88%) with grading score 25 on day 45 and 11 patients (44%) with grading score 11 on day 60, respectively.

In 25 patients, 20 patients (80%) had excoriation with grading score 43 on day 0, 16 patients (64%) with grading score 27 on day 15, 14 patients (56%) with grading score 20 on day 30, 10 patients (40%) with grading score 11 on day 45 and 4 patients (16 %) with grading score 4 on day 60, respectively. The patients who presenting lichenification were 24 patients (96%) with grading score 57 on day 0, 24 patients (96%) with grading score 48 on day 15, 24 patients (96%) with grading score 42 on day 30, 22 patients (88%) with grading score 25 on day 45 and 13 patients (52%) with grading score 24 on day 60, respectively. Moreover, there were statistically significant ($p < 0.001$) on all clinical presentations according to EASI.

According to Traditional Medicine score, the patients who presenting pruritus (*kandu*) were 25 patients (100%) with grading score 46 on day 0, 25 patients (100%) with grading score 39 on day 15, 20 patients (80%) with grading score 25 on day 30, 16 patients (64%) with grading score 17 on day 45 and 13 patients (52%) with grading score 13 on day 60, respectively.

Out of 25 patients, three patients (12%) had mild type of burning sensation (*daha*) with grading score 3 on day 0, one patient (4%) with grading score 1 on day 15, one patient

(4%) with grading score 0 on day 30, no patient on day 45 and day 60, respectively.

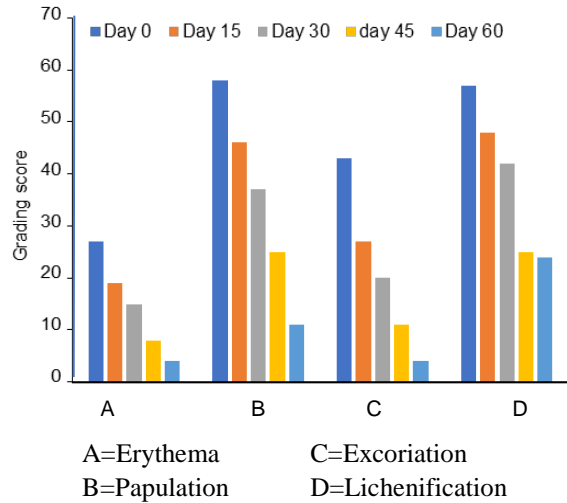


Fig. 1. Grading score on clinical presentation according to EASI score

Dryness (*ruksha*) was observed in 24 patients (96%) with grading score 65 on day 0, 24 patients (96%) with grading score 54 on day 15, 24 patients (96%) with grading score 49 on day 30, 23 patients (92%) with grading score 35 on day 45 and 17 patients (68%) with grading score 25 on day 60, respectively.

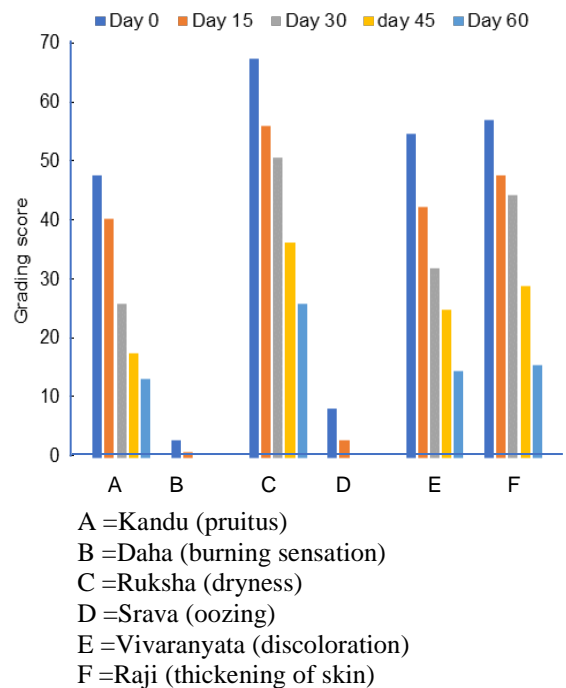


Fig. 1. Grading score on clinical presentation according to Traditional Medicine score

Oozing (*srava*) was detected in six patients (24%) with grading score 8 on day 0, two patients (8%) with grading score 3 on day 15, no patient on day 30, day 45 and day 60, respectively. Discoloration (*vivaranyata*) was seen in all patients (100%) with grading score 53 on day 0, 25 patients (100%) with grading score 41 on day 15, 25 patients (100%) with grading score 31 on day 30, 23 patients (92%) with grading score 24 on day 45 and 14 patients (56%) with grading score 14 on day 60, respectively.

The patients who presenting thickening of skin (*raji*) were 24 patients (96%) with grading score 55 on day 0, 24 patients (96%) with grading score 46 on day 15, 24 patients (96%) with grading score 43 on day 30, 22 patients (88%) with grading score 28 on day 45 and 13 patients (52%) with grading score

15 on day 60, respectively. Furthermore, there were statistically significant difference ($p < 0.001$) in pruritus, dryness, discoloration and thickening of skin before and after the intervention. However, there were no statistically significant ($p = 0.083$) on burning sensation and ($p = 0.29$) on oozing.

Figure 1 and 2 showed that the changes of grading score on clinical presentations of each patient according to EASI score and Traditional Medicine score from day 0 to day 60.

In comparison of mean scores of overall effect of clinical presentations according to EASI score, the mean scores at day 0, day 15, day 30, day 45 and day 60 were 3.23, 2.47, 1.97, 1.17 and 0.49, respectively. The p values between treatment intervals (Day 0 and 15, 30, 45, 60) were < 0.001 (Table 1).

Table 1. Comparison of EASI score on day 15, day 30, day 45, day 60 with day 0

Comparison of clinical presentations	Mean	MD	SD	SE	95% confidence interval of difference		% relief	T	P
					Lower	Upper			
Day 0	3.23								
Day 15	2.47	0.76	0.74	0.15	0.45	1.07	23.83	5.14	0.000
Day 0	3.23								
Day 30	1.97	1.31	1.45	0.29	0.71	1.91	39.00	4.51	0.000
Day 0	3.23								
Day 45	1.17	2.06	1.50	0.30	1.45	2.68	63.77	6.88	0.000
Day 0	3.23								
Day 60	0.49	2.74	1.81	0.36	1.99	3.49	84.82	7.58	0.000

MD= Mean Difference, SD=Standard Deviation, SE=Standard Error

Table 2. Comparison of Traditional Medicine score on day 15, day 30, day 45, day 60 with day 0

Comparison of clinical presentations	Mean	MD	SD	SE	95% confidence interval of difference		% relief	T	P
					Lower	Upper			
Day 0	9.2								
Day 15	7.36	1.84	1.40	0.28	1.26	2.42	20.00	6.55	0.000
Day 0	9.2								
Day 30	5.96	3.24	1.94	0.39	2.44	4.00	35.00	8.34	0.000
Day 0	9.2								
Day 45	4.16	5.04	1.67	1.33	4.35	5.73	55.00	15.09	0.000
Day 0	9.2								
Day 60	2.44	6.76	2.00	0.40	5.94	7.58	73.00	17.03	0.000

MD= Mean Difference, SD=Standard Deviation, SE=Standard Error

In comparison of mean scores of overall effect of clinical presentations according to Traditional Medicine score, the mean scores at day 0, day 15, day 30, day 45 and day 60

were 9.2, 7.36, 5.96, 4.16 and 2.44, respectively. The p values between treatment intervals (Day 0 and 15, 30, 45, 60) were < 0.001 (Table 2).

DISCUSSION

Atopic eczema is a multifaceted, chronic relapsing inflammatory skin disease. In Ulcer and Sore Therapy Ward of TMTH, Mandalay, it is one of the most common skin diseases. There are many kinds of Traditional Medicines in Ulcer and Sore Therapy Ward of TMTH, Mandalay used for atopic eczema. In this study, STMT were selected according to Traditional Medicine concept, their pharmacological actions and clinical experiences on treatment of atopic eczema. It was assessed by EASI score (erythema, papulation, excoriation and lichenification) as well as Traditional Medicine score (*kandu* (pruritus), *daha* (burning sensation), *ruksha* (dryness), *srava* (oozing), *vaivaranyata* (discoloration) and *raji* (thickening of skin).

Family history of atopic diseases is one of the four major criteria in diagnosis of atopic eczema.¹⁴ Out of 25 patients, 12 patients (48%) were associated with family history of atopic dermatitis in this study. Zeppa, Bellini and Lisi¹⁵ described that among 332 adult patients, 122 patients (36.7%) had family history of atopic diseases. In contrast, Yogita & Aradhana¹⁶ showed that 83.33% of adult patients had no family history. Even though the family history of atopic diseases is a criterion to diagnose atopic eczema, this criteria would not be found in all atopic eczema patients.

History of other atopic diseases is also one of the four major criteria in diagnosis of atopic eczema.¹⁴ In this study, eight patients (32%) were associated with personal history of atopy. Among them, seven patients had asthma and one patient had rhinitis. Moreover, Sehgal *et al.*¹⁷ described that out of 100 adult patients, there were 42 patients (42%) with history of allergic rhinitis and 37 patients (37%) with asthma. Orfali *et al.*¹⁸ stated that out of 80 adult patients, 18 patients (22.5%) had asthma, 17 patients (21.25%) had rhinitis and 36 patients (45%) had both conditions. Therefore, all patients with atopic eczema would not be associated

with the personal history of atopic diseases according to above findings.

According to EASI score, the score decreased from day 0 to day 60 and the difference was statistically significant on all symptoms. Although the score decreased from day 0 to day 60, there were no statistically significant difference in burning sensation and oozing according to Traditional Medicine score. It could be assumed that it was a few number of patients who presenting burning sensation and oozing. On the other hand, there were three patients in mild burning at day 0 and one patient in mild type of burning sensation at day 15 and day 30. Finally, there was no burning sensation patients at day 45 and day 60. Moreover, there were five patients in occasional oozing, one patient in excessive oozing at day 0 and one patient in occasional discharge at day 15. There was no oozing patient at day 30, day 45 and day 60. Therefore, the effect of STMT was clinically significant on burning and oozing.

Concept of Traditional Medicine on STMT

According to *Desana* Medicine, atopic eczema is caused by *Ushna Tejo*, excessive *Vāyo* and impaired *Pathivi*.¹⁹ On the other hand, TMF-15 has cold, sweet, bitter and astringent tastes. Besides, TMF-12 has cold, bitter and salty tastes. And then, TMF-27 has hot, bitter and astringent tastes. Moreover, *Anu.-Mju-Hpan-Hsei*: has cold, sour, pungent, bitter and astringent tastes. *Triphala* has sweet, sour, pungent, bitter and astringent tastes as well as Honey has hot and sweet tastes. Mostly, TMFs including STMT have the activities which quench *Ushna Tejo* and balance the function of *vayo* and *pathavi*. Therefore, STMT relieves the signs and symptoms of atopic eczema.

According to *Ayurvedic* Medicine, *rasa* (taste) attributes to various pharmacological actions of *dravya* (medicine).²⁰ *Rasa* of *dravya* contributes significantly towards the specific action of *dravya*. Astringent taste heals wound and promote normal skin colour.²¹ Bitter taste alleviate burning

sensation, itching and skin diseases.²⁰ Thus, not only oral medicines but also cleansing solution and external application are prominently effective on signs and symptoms of atopic eczema. Finally, no side effect of STMT was observed throughout the study period.

Conclusion

The result of this study determined that STMT was effective therapy on clinical symptoms of atopic eczema not only statistically but also Traditional Medicine concept. This study suggested that STMT was a reliable therapy in the management of *Vicharchika* (Atopic eczema).

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