

EFFECT OF *ĀRAGVADHĀDI LEPA* IN ECZEMA (*VICARCIKĀ*) – A PILOT STUDY

Dr. Talekar Manisha*¹, Dr. Deshmukh Prashant Nareshrao², Dr. Mandal Sisir Kumar³,
Dr. B. K. Sevatkar⁴ and Dr. R. Govind Reddy⁵

¹Ph.D. Scholar, Roganidana Evam Vikriti Vijanana Department, National Institute of Ayurveda, Jaipur.

²Assistant Professor, Roganidana Evam Vikriti Vijanana Department, Vaidya Yagya Dutt Sharma Ayurved Mahavidyalaya, Khurja Uttarpradesh.

^{3,4}Assistant Professor, Roganidana Evam Vikriti Vijanana Department, National Institute of Ayurveda, Jaipur.

⁵Research Officer (Scientist-III) & In-Charge, R.R.A. Podar Central Ayurveda Research Institute for Cancer, Worli, Mumbai-18.

Article Received on
09 June 2017,

Revised on 29 June 2017,
Accepted on 19 July 2017

DOI: 10.20959/wjpr20178-9117

*Corresponding Author

Dr. Talekar Manisha

Ph.D. Scholar, Roganidana
Evam Vikriti Vijanana
Department, National
Institute of Ayurveda,
Jaipur.

ABSTRACT

Eczema is an inflammatory condition of the skin characterised by groups of vesicular lesions with a variable degree of exudates and scaling. This condition is comparable with *Vicarcikā Kuṣṭha* in *Āyurvedika* system of medicine. *Āyurveda* classics describe a number of formulations to combat with *Kuṣṭha* (skin diseases) which offers effective remedy for eczema. **Aim and objective:** To assess the effect of *Āragvadhādi Lepa* in eczema (*Vicarcikā*). **Methods and Material:** This is pilot study. Total 10 patients of either gender with age above 18 years and below 70 years suffering from *Vicarcikā Kuṣṭha* (eczema) after taking their written informed consent were selected randomly from O.P.D. & I.P.D. of National Institute of Ayurveda, Jaipur. These

patients were given *Āragvadhādi Lepa* for local application daily once in a day for 30 days.

Results: Trial drug *Āragvadhādi Lepa* showed statistically very significant improvement on *Kanḍū* (P=0.002), *Srāva* (P=0.002), *Dāha* (P=0.0078), *Piḍṭkā* (P=0.002) & *Rājī* (P=0.0078) and in laboratory parameters statistically significant improvement on E.S.R. (P=0.0481) and Neutrophil (P= 0.0442). **Conclusions:** *Āragvadhādi Lepa* has therapeutic modality and has got immense potential for management of *Vicarcikā* (Eczema).

KEYWORDS: *āragvadhādi lepa*; eczema; *kuṣṭha*; *vicarcikā*.

INTRODUCTION

Skin diseases are narrated in *Āyurvedika Samhitās* under the heading of *Kuṣṭha*. *Vicarcikā* to a greater extent resembles eczema.^[1] Term “Eczema” is a Greek word (Ec: means out and Zeo: means boil). The whole word implies “boil out”. Eczema is defined as inflammatory response of the skin to multiple agents, characterized by erythema, oozing, crusting and later lichenification, intra epidermal oedema, spongiosis and vesiculation is the histological hallmark. Dermatitis is being used as synonyms of eczema by most of dermatologists.^[2] Though, modern drugs provide instant relief, they settle in a number of adverse effects. *Āyurveda* reached the zenith of knowledge concerning skin diseases. There is a continuous search for superior remedies to battle the lesions that occurs on external surfaces of body. Itching on lesions and secretory patches over the body surface is the most difficult and hampers the routine activities of the affected individuals. On other side of the coin, such lesions may affect psychological status of the individual and even lead to social stigma. Considering the importance of the management, *Bahiparimārjana Drug* (drugs for topical applications) have been emphasized in the classics.

Ācārya Caraka has categorically described the different categories of external *Kuṣṭhahara Lepa*. (Paste) and given more precedence to external application than internal (*Śamana*) therapy.^[3] So for current research *Āragvadhādi Lepa*^[4] is taken for local application.

AIM AND OBJECTIVE: To assess the effect of *Āragvadhādi Lepa* in eczema (*Vicarcikā*).

MATERIALS AND METHODS

This is a pilot study. Total 10 patients of either gender suffering from *Vicarcikā Kuṣṭha* (eczema) after taking their written informed consent were selected randomly from O.P.D. & I.P.D. of National Institute of Ayurveda, Jaipur. These patients were treated with *Āragvadhādi Lepa* for local application daily once in a day for 30 days.

Inclusion criteria

Patients above 18 years and below 70 years belonging to either gender having clinical presentation of *Vicarcikā Kuṣṭha* (eczema) as mentioned in the *Āyurveda* and Allopathic texts were selected for the trial.

Exclusion criteria

Patient associated with serious illness like HIV, malignancy and tuberculosis; Patients with systemic disorders viz. cardiac problems, uncontrolled hypertension and diabetes mellitus, etc.

Investigations

Routine haematological investigations like Total Leukocyte Count, Differential count, Haemoglobin% and ESR were done before and after treatment.

Selection of drug

Āragvadhādi Lepa^[5] was selected for local application as described in *Caraka Samhitā*. *Āragvadhādi Lepa* is combination of leaves of *Āragvadhā* (*Cassia fistula* Linn.), *Karavīra* (*Nerium indicum* L.) and *Kākamācī* (*Solanum indicum* Linn.). The detail of method of drug preparation is given below:

***Āragvadhādi Lepa*:** For the preparation of *Āragvadhādi Lepa*, fresh leaves of *Āragvadhā* (*Cassia fistula* Linn.), *Karavīra* (*Nerium indicum* L.) and *Kākamācī* (*Solanum indicum* Linn.) were taken and then cleaned. The paste of above drug was made with the help of *Takra*. This formed paste was locally applied over the affected area till drying. After drying it was washed with Luke warm water. This procedure was repeated daily once in a day for 30 days. All the patients were advised to take light, easily digestible diet & to avoid incompatible food.

Assessment Criteria

After completion of 30 days treatment, assessment was done in terms of statistical evaluation based on the changes in both subjective and objective (laboratory) parameters like *Kaṇḍū* (itching), *Rujā* (pain), *Dāha* (burning sensation), *Vaivarṇya* (discolouration), *Piḍakā* (eruption), *Srāva* (discharge) & *Rājī* (lines / thickening of skin) which were classified into grades and results were analysed statistically.

RESULTS

Using 'Graph Pad In stat 3' software, all the calculations were calculated and obtained data were analysed statistically. Scored values of non parametric parameters were analysed by Wilcoxon signed rank test and for investigational values, Paired 't' test was used.

Table No. 1: Effect of *Āragvadhādi Lepa* on Subjective parameters

Symptoms	N	Mean		Dif.	% of Change	SD	SE	W	P	Remarks
		BT	AT							
<i>Vaivarṇya</i>	10	2.1	1.2	0.90	42.86	0.74	0.23	28	0.0156	significant
<i>Kaṇḍū</i>	10	2.2	0.60	1.6	72.73	0.96	0.30	55	0.002	very significant
<i>Srāva</i>	10	2.5	0.40	2.1	84	0.74	0.23	55	0.002	very significant
<i>Rujā</i>	10	1.6	1.2	0.40	25	0.70	0.22	6	0.25	not significant
<i>Dāha</i>	10	1.5	0.70	0.80	36.36	0.43	0.13	36	0.0078	very significant
<i>Rājī</i>	10	2.2	0.40	1.8	81.81	1.03	0.33	36	0.0078	very significant
<i>Piḍīkā</i>	10	2.9	0.40	2.5	86.20	0.53	0.17	55	0.002	very significant

Effect of trial drug *Āragvadhādi Lepa* on subjective parameters showed very significant improvement on *Kaṇḍū* (P=0.002), *Srāva* (P=0.002), *Dāha* (P=0.0078), *Piḍīkā* (P=0.002) & *Rājī* (P=0.0078). Significant improvement was found on *Vaivarṇya* (P=0.0156). *Rujā* (P=0.25) considered statistically not significant. (Table No.1).

Table No.2: Effect of *Āragvadhādi Lepa* on laboratory parameters:

Parameters	N	Mean		Dif.	% of Change	SD	SE	't'	P	Remarks
		BT	AT							
Hb%	10	12.97	12.90	0.070	0.53	0.28	0.089	0.7821	0.4543	N.S.
T.L.C.	10	8925.5	8925.0	0.500	0.005	4.35	1.38	0.3633	0.7248	N.S.
N	10	66.20	61.40	4.80	7.25	6.49	2.05	2.337	0.0442	Sig.
L	10	28.70	28.90	-0.20	-0.69	0.63	0.20	1.00	0.3434	N.S.
E	10	3.700	3.600	0.100	2.70	0.88	0.28	0.3612	0.7263	N.S.
M	10	2.400	2.400	0.00	0	0.47	0.14	0.00	>0.9999	N.S.
E.S.R.	10	15.800	8.300	7.500	47.46	10.37	3.28	2.286	0.0481	Sig.

(Here, Hb%- Haemoglobin, T.L.C.- Total leukocyte count, N- Neutrophil, L- Lymphocyte, E- Eosinophil, M- Monocyte, ESR- Erythrocyte Sedimentation Rate, N.S.- Not significant, Sig.- Significant).

Effect of trial drug *Āragvadhādi Lepa* on laboratory parameters showed statistically significant (P=0.0481) improvement on E.S.R. and Neutrophil (P= 0.0442). Lymphocyte (P=0.3434), Eosinophils (P=0.7263), Monocytes (P>0.9999), Hb% (P=0.4543) and T.L.C. (P=0.7248) showed statistically not significant improvement. (Table No.2).

DISCUSSION

The role of *Bahiparimārjana Dravyas* (topical medicaments) has been emphasised in classics. *Ācārya Suśruta*^[6] has explained the role of external applications in wounds that external applications cause soothing effect, cleansing or antimicrobial, anti inflammatory and healing. The action of these 3 drugs over eczema can be explained by *Āyurvedika* as well as modern theories.

Probable mode of action of *Āragvadhādi Lepa*

Āragvadhā (*Cassia fistula* Linn.), *Karavīra* (*Nerium indicum* L.) and *Kākamācī* (*Solanum indicum* Linn.) having *Tikta* (bitter), *Kaṣāya* (astringent) *Rasa* so it may be acting as *Vranaśodhaka* and *Vranaropaka* (wound healing property) and also having *Kuṣṭhagna*, *Kaṇḍūghna* (anti-itching), *Vedanaśāmaka* (analgesic) and *Śoṭhaghna* (anti-inflammatory) property.

• *Āragvadhā* (*Cassia fistula* Linn.)

Āragvadhā Patra (leaves of *Cassia fistula* Linn.) being *Kuṣṭhagna*, *Kaṇḍūghna* and *Kṛmināśaka*^[7] properties which directly act on eczema. It also has anti-inflammatory property.^[8] It prevents secondary infection because it acts as antibacterial and also having an antifungal activity, anti-inflammatory & wound healing activity.^[9]

• *Karavīra* (*Nerium indicum* Linn.)

It is well known drug for *Kuṣṭhagna*^{[10],[11]} *Vranahara*^[12] & *Kaṇḍūghna*^[13] having antibacterial activity.^[14] It also scientifically proved as steroidal, anti-inflammatory and having cytotoxic activity.^[15]

• *Kākamācī* (*Solanum nigrum* Linn.)

The herb *Kākamācī* (*Solanum nigrum* Linn.) is described as *Kuṣṭhagna*,^{[16],[17]} *Kaṇḍūghna*^[18] in *Āyurvedika* texts. It also has cytotoxic activity^[19] and steroidal effect.^[20]

Therefore *Āragvadhādi Lepa* shows very significant improvement for *Kaṇḍū* (itching), *Srāva* (oozing), *Piḍikotpattī* (eruption), *Rājī* (lining / Thickening of skin), *Vaivarṇya* (discoloration), *Dāha* (burning) and *Rujā* (pain) which were the chief complaints of the patients and also had significant result on E.S.R and Neutrophil count.

These properties of above drugs checks the local inflammation and infection because of which, reduction in swelling, pain and tenderness can be expected. These drugs promote healing by wound size reduction, margin approximation and epithelialisation leading to healthy scar formation and maturation. No adverse reactions of the trial drug were found to be reported in any of the patients during the study period.

CONCLUSION

Āragvadhādi Lepa not only fulfil antibiotic, anti-inflammatory or analgesic effect but also possess good healing and cosmetic effect without any complications. Thus, from the above results, it can conclude that the *Āragvadhādi Lepa* has therapeutic modality and has got immense potential for management of *Vicarcikā* (eczema). When compared with the cost of the modern topical steroids, anti-fungal creams; *Āragvadhādi Lepa* is safe, cost effective and result oriented in all kinds of *Vicarcikā Kuṣṭha*.

ACKNOWLEDGEMENT

I express my deepest gratitude to respected teachers of department of Roga evam Vikriti Vijanana, National Institute of Ayurveda, Jaipur for their valuable suggestions & ideas during this research work.

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