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

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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 Āyurveda 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 Kaṇḍū (P=0.002), Srāva (P=0.002), Dāha (P=0.0078), Piḍīkā (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 Saṁhitās 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 secretary 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 Kuṣṭha hara 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\textsuperscript{[5]} was selected for local application as described in Caraka Saṁhitā. Āragvadhādi Lepa is combination of leaves of Āragvadha (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 Āragvadha (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

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>N</th>
<th>Mean</th>
<th>Dif.</th>
<th>% of Change</th>
<th>SD</th>
<th>SE</th>
<th>W</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT</td>
<td>AT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaivarṇya</td>
<td>10</td>
<td>2.1</td>
<td>1.2</td>
<td>0.90</td>
<td>42.86</td>
<td>0.74</td>
<td>0.23</td>
<td>28.0056</td>
<td>significant</td>
</tr>
<tr>
<td>Kaṇḍū</td>
<td>10</td>
<td>2.2</td>
<td>0.60</td>
<td>1.6</td>
<td>72.73</td>
<td>0.96</td>
<td>0.30</td>
<td>55.0002</td>
<td>very significant</td>
</tr>
<tr>
<td>Srāva</td>
<td>10</td>
<td>2.5</td>
<td>0.40</td>
<td>2.1</td>
<td>84</td>
<td>0.74</td>
<td>0.23</td>
<td>55.0002</td>
<td>very significant</td>
</tr>
<tr>
<td>Rujā</td>
<td>10</td>
<td>1.6</td>
<td>1.2</td>
<td>0.40</td>
<td>25</td>
<td>0.70</td>
<td>0.22</td>
<td>6.25</td>
<td>not significant</td>
</tr>
<tr>
<td>Dāha</td>
<td>10</td>
<td>1.5</td>
<td>0.70</td>
<td>0.80</td>
<td>36.36</td>
<td>0.43</td>
<td>0.13</td>
<td>36.00078</td>
<td>very significant</td>
</tr>
<tr>
<td>Rājī</td>
<td>10</td>
<td>2.2</td>
<td>0.40</td>
<td>1.8</td>
<td>81.81</td>
<td>1.03</td>
<td>0.33</td>
<td>36.00078</td>
<td>very significant</td>
</tr>
<tr>
<td>Piḍīkā</td>
<td>10</td>
<td>2.9</td>
<td>0.40</td>
<td>2.5</td>
<td>86.20</td>
<td>0.53</td>
<td>0.17</td>
<td>55.0002</td>
<td>very significant</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>N</th>
<th>Mean</th>
<th>Dif.</th>
<th>% of Change</th>
<th>SD</th>
<th>SE</th>
<th>‘t’</th>
<th>P</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
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<td>BT</td>
<td>AT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hb%</td>
<td>10</td>
<td>12.97</td>
<td>12.90</td>
<td>0.070</td>
<td>0.53</td>
<td>0.28</td>
<td>0.89</td>
<td>0.7821</td>
<td>N.S.</td>
</tr>
<tr>
<td>T.L.C.</td>
<td>10</td>
<td>8925.5</td>
<td>8925.0</td>
<td>0.500</td>
<td>4.35</td>
<td>1.38</td>
<td>0.3633</td>
<td>0.7248</td>
<td>N.S.</td>
</tr>
<tr>
<td>N</td>
<td>10</td>
<td>66.20</td>
<td>61.40</td>
<td>4.80</td>
<td>7.25</td>
<td>6.49</td>
<td>2.05</td>
<td>2.337</td>
<td>N.S.</td>
</tr>
<tr>
<td>L</td>
<td>10</td>
<td>28.70</td>
<td>28.90</td>
<td>-0.20</td>
<td>-0.69</td>
<td>0.63</td>
<td>0.20</td>
<td>1.00</td>
<td>0.3434</td>
</tr>
<tr>
<td>E</td>
<td>10</td>
<td>3.700</td>
<td>3.600</td>
<td>0.100</td>
<td>2.70</td>
<td>0.88</td>
<td>0.28</td>
<td>0.3612</td>
<td>N.S.</td>
</tr>
<tr>
<td>M</td>
<td>10</td>
<td>2.400</td>
<td>2.400</td>
<td>0.00</td>
<td>0</td>
<td>0.47</td>
<td>0.14</td>
<td>0.00</td>
<td>&gt;0.9999</td>
</tr>
<tr>
<td>E.S.R.</td>
<td>10</td>
<td>15.800</td>
<td>8.300</td>
<td>7.500</td>
<td>47.46</td>
<td>10.37</td>
<td>3.28</td>
<td>2.286</td>
<td>0.0481</td>
</tr>
</tbody>
</table>

(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

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

- Āragvadha (Cassia fistula Linn.)

Āragvadha Patra (leaves of Cassia fistula Linn.) being Kuṣṭhagna, Kaṇḍūghna and Krmināśaka properties which directly act on eczema. It also has anti-inflammatory property. It prevents secondary infection because it acts as antibacterial and also having an antifungal activity, anti-inflammatory & wound healing activity.

- Karavīra (Nerium indicum Linn.)

It is well known drug for Kuṣṭhagna, Vranahara & Kaṇḍūghna having antibacterial activity. It also scientifically proved as steroidal, anti-inflammatory and having cytotoxic activity.

- Kākamācī (Solanum nigrum Linn.)

The herb Kākamācī (Solanum nigrum Linn.) is described as Kuṣṭhagna, Kaṇḍūghna in Āyurvedika texts. It also has cytotoxic activity and steroidal effect.

Therefore Āragvadhādi Lepa shows very significant improvement for Kaṇḍū (itching), Srāva (oozing), Piḍikoṭpatī (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 Vicarciṁa (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 Vicarciṁa Kuṭṣha.

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