A Herbal Formulation in the Treatment of Different Types of Dermatitis

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ABSTRACT
A polyherbal formulation, Purim, which has anti-inflammatory and immunomodulatory properties and is a chealeating agent for various toxins in the blood, has been advocated to treat various skin disorders. Purim therapy was effective in treating various types of dermatitis in this open clinical trial. Fifty two patients were treated with Purim for 1 month, out of which forty nine completed the study. These patients had various diseases such as lichen planus, psoriasis, chronic lichen simplex, chronic eczema, contact dermatitis, etc. The patients were dispensed Purim tablets at a dose of 2 tablets twice a day and were assessed every week for 1 month. It was observed that the symptom score reduced at the end of 2 weeks onwards. At the end of the study, the symptom score for psoriasis reduced from 16.15±0.93 to 7.61±1.13, chronic lichen simplex from 22.44±1.9 to 16.22±1.57, chronic eczema from 20.63±2.15 to 10.13±1.24, chronic lichen planus from 26.14±3.38 to 15.29±2.95, contact dermatitis from 27.75±3.94 to 15.00±4.37 and in other skin diseases from 18.56±2.30 to 8.66±1.51. Purim was effective in reducing most of the symptoms considerably in all these chronic cases.

Keywords: Purim, dermatitis, lichen planus, psoriasis lichen simplex

INTRODUCTION
Dermatitis is a broad term used for any inflammation of the skin, which results in scaling, thickening, flakes, itching, blistering, and change of skin colour. Various skin diseases such as chronic lichen planus, psoriasis, chronic lichen simplex, chronic eczema and various allergies lead to dermatitis. Washing clothes with strong soaps and detergents can also cause dermatitis. Patients with psoriasis suffer life long as treatment is very difficult. Skin lesions in psoriasis is a bothersome problem. Psoriasis has been reported to be present at birth and recently it was reported that it has even occurred in a 108 year old man. Hippocrates (460-377 BC) used the term ‘psora’ and ‘lepra’ for a condition that can be recognised as psoriasis. An early onset of history predicts the severity of the disease relative to the percentage of body surface involved with psoriasis and the response to therapy.
Chronic lichen planus is a unique cutaneous entity consisting of an eruption of papules distinct in colour and configuration, pattern and location of appearance and is microscopic with gross structure. The lesions appear rapidly in less than one week of appearance of the initial lesion. In patients with chronic lichen planus there is a generalised appearance of the lesions, which spreads within 2-4 weeks and in all cases within 4 months. Initially, most of these lesions are located over the limbs. A large percentage of these lesions are located over the lower extremities, but the most common sites are on the flexor surfaces of the wrist and forearm. In these patients pruritus is a common problem and it ranges in severity. At times the treatment is perplexing, difficult and insoluble.

Chronic lichen simplex is a localised itchy condition related to eczema. Usually it is found in the nape of the neck, hand, calves and sometimes dorsa of the feet. A small raised itchy thickened area of skin develops which later results in an impressive, thickened area with mild scaling and increased prominence of skin markings. Sometimes stress can trigger a chain reaction, which results in a lot of itching and scratch marks over the body.

Eczema is also a common disorder seen in daily practice. The words derived from Greek literature means ‘to boil over’, is characterised by dry, itching and inflamed skin. The term eczema is now used interchangeably with the term dermatitis. The most common type is atopic eczema, which generally begins in infancy or childhood and affects upto one fifth of children. The prevalence of eczema has increased 2-3 fold in the last 30 years. The common symptoms include pruritus (itching), erythema (redness), inflammation, dry scaling skin (often presenting in flexures, face, forehead, ankles, and wrists), weeping and crusting skin (particularly if infection is present).

Contact dermatitis occurs when the skin comes into contact with an allergen (something to which one is allergic). Typical allergens include perfumes, cosmetics, rubber, plants (such as poison ivy or poison oak), gold, silver, or nickel, medicated ointments and creams, sunlight, and adhesives (such as tape). This type of dermatitis usually occurs only when there is a contact with a plant or chemical to which one is allergic. The symptoms continue to remain till the offending agent is removed. In contact dermatitis the rash is confined to a specific area, usually with clear boundaries. At times contact dermatitis also results from a prolonged exposure to a substance that eventually begins to irritate. A mild soap used for a prolonged time could result in dermatitis over the years.

At present the only line of treatment for all this is steroids and anti-histamines. Therefore, a clinical trial on the herbal preparation Purim was conducted to find safe and alternative remedies to control the symptoms of different types of dermatitis. Purim, an herbal preparation, has been promoted in various skin disorders. It contains different herbs which have anti-inflammatory and wound healing properties. A few of the herbs present in Purim have the following properties.

Antioxidants play an important role in the treatment of various types of dermatitis. Purim contains herbal antioxidants such as Curcuma longa and Andrographis paniculata. Various studies have shown that Curcuma longa possesses strong antioxidant activity\textsuperscript{3,4}. Curcumin
possesses anti-inflammatory properties\textsuperscript{5}. \textit{Andrographis paniculata} also possesses antioxidant property\textsuperscript{6}. People suffering from dermatitis are immunocompromised and need drugs that can boost their immunity. Some immunopotentiating herbs in Purim include \textit{Azadirachta indica}, which contains immunopotentiating property\textsuperscript{7}, \textit{Tinospora cordifolia}, whose active principles possess strong immunomodulator activity\textsuperscript{8} and \textit{Picrorrhiza kurroa} which has immunostimulatory properties\textsuperscript{9}.

Usually, a lot of toxins are accumulated in the body through the various foods that we consume. Due to this the liver gets damaged which results in various dermatological diseases. Purim contains a few hepatoprotective herbs such as \textit{Cassia fistula}, which has been known to contain hepatoprotective activity. It removes all the toxins from the blood\textsuperscript{10}. \textit{Eclipta alba} present in Purim has shown to possess hepatoprotective activity which remove various toxins accumulated in the body\textsuperscript{11}.

Allergic dermatitis is aggravated due to intestinal worms, Purim’s constituent \textit{Saussurea lappa} has potent antinematodal activity\textsuperscript{12}. Purim also contains \textit{Psoralea corylifolia}, which contains an antipsoriatic principle.

This clinical trial was planned to observe the effect of Purim in various skin disorders presenting with dermatitis. The skin disorders included psoriasis, chronic lichen simplex, chronic eczema, chronic lichen planus, contact dermatitis and other miscellaneous conditions.

\textbf{MATERIAL AND METHODS}

Fifty two patients, presenting with dermatitis who attended the Skin and VD, out patient department at Bowring & Lady Curzon Hospital, were included in the trial. There were 40 males and 12 females aged between 18-70 years who were dispensed Purim tablets and advised to take the medication at a dose of 2 tablets twice daily for 4 weeks. They were advised to attend the OPD for follow up every week. They were evaluated at the end of 4 weeks for symptomatic relief of dermatological conditions. The lesions were assessed by different signs such as dermal oedema, pruritus, papules, vesicles, urticaria, tenderness, redness, epidermal thickening and pigmentation. The scaling of the lesions were assessed according to size area, excoriation, exudation, pinpoint haemorrhage and weeping exudation. The patients were advised to apply various moisturising and soothing agents over the lesions. Patients who had infective dermatitis were prescribed antibiotics.

\textbf{RESULTS}

Out of the 52 patients, 49 patients completed the trial out of which 39 were males and 10 females. Results showed that there was a gradual decrease in the signs and symptoms of dermatitis from the 2\textsuperscript{nd} week onwards. At the end of the trial patients with psoriasis showed

| Table 1: Showing different types of Skin conditions treated with Purim |
|---------------------------------|---------------|-------------|
| Type of skin disease            | No. of patients | Percentage  |
| Psoriasis                       | 13             | 26.53       |
| Chronic lichen simplex          | 9              | 18.37       |
| Chronic eczema                  | 8              | 16.33       |
| Chronic lichen planus           | 6              | 12.24       |
| Contact dermatitis              | 4              | 8.16        |
| Miscellaneous conditions        | 9              | 18.37       |
significant decrease in the lesions ($P^{***}<0.0001$). The other diseases show a decrease in the lesions were chronic lichen simplex ($P^{**}<0.0051$), chronic eczema ($P^{***}<0.0009$), chronic lichen planus ($P^*<0.0324$) and in miscellaneous conditions ($P^{**}<0.0025$). Contact dermatitis showed partial decrease in the lesions ($P<0.07$).

<table>
<thead>
<tr>
<th>Type of disease</th>
<th>1st week</th>
<th>2nd week</th>
<th>3rd week</th>
<th>4th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psoriasis</td>
<td>16.15 ± 0.93</td>
<td>13.25 ± 1.41</td>
<td>10.00 ± 1.15</td>
<td>7.61 ± 1.13</td>
</tr>
<tr>
<td>Chronic lichen simplex</td>
<td>22.44 ± 1.9</td>
<td>22.11 ± 1.72</td>
<td>16.89 ± 1.11</td>
<td>16.22 ± 1.57</td>
</tr>
<tr>
<td>Chronic eczema</td>
<td>20.63 ± 2.15</td>
<td>16.50 ± 1.64</td>
<td>15.50 ± 1.96</td>
<td>10.13 ± 1.24</td>
</tr>
<tr>
<td>Chronic lichen planus</td>
<td>26.14 ± 3.38</td>
<td>23.57 ± 3.53</td>
<td>16.43 ± 2.68</td>
<td>15.29 ± 2.95</td>
</tr>
<tr>
<td>Contact dermatitis</td>
<td>27.75 ± 3.94</td>
<td>27.95 ± 3.94</td>
<td>18.50 ± 2.63</td>
<td>15.00 ± 4.37</td>
</tr>
<tr>
<td>Miscellaneous conditions</td>
<td>18.56 ± 2.30</td>
<td>15.22 ± 2.24</td>
<td>12.67 ± 1.44</td>
<td>8.66 ± 1.51</td>
</tr>
</tbody>
</table>

**DISCUSSION**

The symptoms of dermatitis vary from person to person in various diseases. The most common symptoms are dry itchy skin, with rashes and cracks present over the skin. People with dermatitis seem to be sensitive to itching and feel the need to scratch. Skin in dermatitis can be changed by the pattern of scratching which results in skin infection.

In this clinical trial, skin irritation presented itself in a number of ways. The most common symptoms were itching, scales, blisters, thickened skin, flakes and colour changes. No predominant age or age group was more affected by dermatitis, different forms of dermatitis affect different ages, infants are diagnosed with diaper rash, adults with atopic dermatitis. Both sexes are equally afflicted with dermatitis and variations are seen based on the individual differences in exposure to the allergen or due to the skin variations between men and women.

There are three established signs that signify dermatitis: 1. Immediate manifestations 2. Long-term manifestations and 3. Diagnosis based on characteristic descriptions and distribution of the lesions. In this clinical trial patients in the acute phase had itching (usually the first symptom), oozing and crusting of lesions and formation of papules or vesicles with redness on the skin. In chronic patients, there were formations of scales and fissures, scratching induced hyperkeratosis (thickening of the skin), cutaneous erythema (redness), lesions in the areas of direct contact with irritants (often in a pattern that is in the same shape as the distribution of irritant on the skin), and lesions were also arrayed linearly, had sharp borders and angles, formed more easily on regions where the epidermis is thinner and did not form as much on palms, feet, or deeper skin-fold areas.

The results from this clinical trial were encouraging. The symptoms started reducing from the second week onwards and the results were clearly visible at the end of the fourth week. Most of the patients were relieved of the symptoms. The ingredients probably have anti-inflammatory, immunomodulatory and hepatoprotective properties. The combined action promoted rapid healing of skin lesions in dermatitis. It can also be hypothesized that it also removes various toxins and allergens from the body.
CONCLUSION
Considering the various distinguishing attributes of Purim in respect of its efficacy and tolerability, the drug would be a valuable addition to the therapeutic armamentarium in the treatment of dermatitis due to different skin diseases. There were no adverse effects seen in any of the patients.

REFERENCES