Clinical evaluation of the efficacy of polyherbal Unani formulations in scabies

Syed Mahtab Ali*, Mahe Alam & Anwar Jamal

Department of Anatomy and Physiology, Faculty of Medicine (U), Jamia Hamdard, New Delhi 110062; TKDL, NISCAIR, Dr K S Krishnan Marg, New Delhi 110012

Received 6 June 2005; revised 5 October 2006

Scabies is a contagious skin disease caused by a burrowing mite. Intense itching is induced by the mite burrowing into the skin to lay eggs, generally in the area of the wrist, fingers, genitals or feet. The disease is spread by close contact with infected person or from contaminated clothes. It affects hands and wrist (63%), extensor aspect of elbow (10%) and other sites (27%). It is commonly found in densely populated areas and especially in low socioeconomic groups. In Unani System of Medicine, an oral formulation consisting of

Shahtra (Fumaria indica Pugsley), Chiraita (Swertia chirayita Roxb. ex Flem. Karst), Sarphonka (Tephrosia purpurea Linn. Pers.), Gul-e-mundi (Sphaeranthus indicus Linn.), and Unnab (Ziziphus jujuba Mill.) along with local formulation of Gandhak (Sulphur), Murdaarsang (Letharg) and Kaphoor (Cinnamomum camphora Linn.) is evaluated in patients fulfilling the diagnostic criteria. The study showed significant reduction in the signs and symptoms of scabies after 15 days of treatment. The objective of the study was to evaluate the therapeutic efficacy of polyherbal formulations in scabies with a view to find a cheaper and effective treatment, free from side effects.

Keywords: Polyherbal formulations, Unani medicine, Scabies, Herbal formulation

IPC Int. Cl*: A61K36/00, A61P17/00

Scabies is an infectious disease, which spreads from one person to another. Usually, it is common in dirty polluted areas, and person (s) having very poor sanitary conditions. There are red colour small rashes over the web of fingers, abdomen, back, groins, testicles and some time over the whole body. These rashes cause very severe itching and at later stage pus or water is discharged from the rashes if secondary infection takes place. Gravid female mites measuring 0.3-0.4 mm length burrow superficially beneath the stratum corneum for a month, depositing 2-3 eggs a day and nymphs that hatch from these eggs mature in about two week through a series of molts and then emerge as adults to the surface of the skin where they mate and subsequently reinvade the skin of the same or another host. Transfer of newly fertilized female mites from person to person occurs by intimate personal contact and is facilitated by crowding, uncleanliness and multiple sexual partners. Medical practitioners are at particular risk of infestation. Transmission via sharing of contaminated bedding or clothing is infrequent because these mites cannot survive much more than a day without host contact. The itching and rash associated with scabies derive from a sensitization reaction directed against the excreta that the mite deposits in its burrow. According to the theory of Unani system, this condition happens due to Fasaad-e-Khoon (morbidity of blood). Some Unani physicians, Abul Hasan Ali Bin Rabban Tabri and Hakim Kabiruddin had also mentioned Deedan-e-Jarb (insect or mites of scabies) as causal organisms of scabies. From modern point of view, the causative organism of scabies is Sarcoptes scabiei or Acarus scabiei. Scabies can be diagnosed by complaint of itching particularly nocturnal, follicular lesions at affected sites, simultaneous spread to other members of the family and presence of parasite in skin lesion.

Methodology

The study was conducted on 30 patients of both sexes and different age groups in a Charitable Hospital, Madangeer, New Delhi. The herbal drugs used orally was prepared as Joshanda (decoction), drugs were boiled in proportion of 4 or 8 times of water, reduced to one fourth, thereafter strained in cloth and local preparation made from powder of drugs in a form of Zimaad (paste) after mixing 200 ml coconut oil as base (Table 1&2). It was evaluated by the presence of some or all of the following signs and symptoms (i) itching particularly nocturnal (ii) Pruritic vesicles and papules especially at the site of the fingers (Fig.1), legs (Fig.2), heels and

*Corresponding author
on the palms (iii) Burning sensation, eruptions, scaling of skin and watery/purulent discharge. Presence of ova or faeces of Sarcoptes scabiei in the skin scrap test. For oral preparation, Shahtra (Fumaria indica Pugsley), Chiraita (Swertia chirayita Roxb. ex Flem. Karst), Sarphonka (Tephrosia purpurea Linn. Pers.), Gul-e-mundi (Sphaeranthus indicus Linn.) and Unnab (Ziziphus jujuba Mill.), 5 mg each were boiled in proportion of 4 or 8 times of water, reduced to one fourth, thereafter strained in cloth called Joshanda (decoction), given on empty stomach in early morning15 (Table 1).

The powder of Gandhak (sulphur), Murdaarsang (ietharg), and Kaphoor (Cinnamomum camphora Linn.) 10 mg each mixed in 200 ml coconut oil (Cocos nucifera Linn.) as a base and applied locally over the affected parts as Zimaad (paste)16-20 (Table 2).

Clinical study was performed on 30 patients of both sexes (Table 3) and different age groups in Charitable Hospital, Madangeer, New Delhi. The patients fulfilling the above-mentioned diagnostic criteria

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**Table 1—Herbal drugs used orally**

<table>
<thead>
<tr>
<th>Unani drugs</th>
<th>Botanical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shahtra</td>
<td>Fumaria indica Pugsley</td>
<td>5 mg</td>
</tr>
<tr>
<td>Chiraita</td>
<td>Swertia chirayita Roxb. ex Flem. Karst</td>
<td>5 mg</td>
</tr>
<tr>
<td>Sarphonka</td>
<td>Tephrosia purpurea Linn. Pers</td>
<td>5 mg</td>
</tr>
<tr>
<td>Unnab</td>
<td>Ziziphus vulgaris Mill</td>
<td>5 mg</td>
</tr>
<tr>
<td>Gul-e-mundi</td>
<td>Sphaeranthus indicus Linn</td>
<td>5 mg</td>
</tr>
</tbody>
</table>

**Table 2—Herbal drugs used locally**

<table>
<thead>
<tr>
<th>Unani drugs</th>
<th>Scientific/Botanical Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gandhak</td>
<td>Sulphur</td>
<td>10 gm</td>
</tr>
<tr>
<td>Kaphoor</td>
<td>Cinnamomum camphora Linn.</td>
<td>10 gm</td>
</tr>
<tr>
<td>Murdaarsang</td>
<td>Letharg</td>
<td>10 gm</td>
</tr>
<tr>
<td>Coconut oil</td>
<td>Cocos nucifera Linn.</td>
<td>200 ml</td>
</tr>
</tbody>
</table>

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were registered as study cases. They were subjected thorough clinical examination and laboratory investigations. The liquid extract of the mentioned herbs was given orally along with the local application of the paste. They are advised first to take bath with luke warm water and after drying with towel used ointment on the affected part. Treatment was given for 15 days. Clinical follow up and skin scrap test was repeated after every 15 days and data were recorded.

Results and discussion
The results were graded as follows:

**Excellent** - (i) Subsidence of all sings and symptoms
(ii) Scrap test was negative for *Sarcoptes scabiei*
(iii) Nonrecurrence of history

**Good** - (i) Subsidence of more than 80% signs and symptoms
(ii) Skin scrap test is negative for the *Sarcoptes scabiei*
(iii) Nonrecurrence

**Fair** - (i) Subsidence of more than 50% signs and symptoms
(ii) Skin scrap test is negative for the *Sarcoptes scabiei*

**No response** - No subsidence of signs and symptoms, skin scrap test positive.

**Side effects** - No side effects were observed from any patient.

After 15 days of treatment (Fig.3), out of 30 patients the itching was relieved in 50%, results were good in 25% and fair in 16% cases. There was no response in 6% cases. Pruritic lesions were completely healed in 40% patients, results were good in 33%, fair in 20% and there was no response in 6% cases. Secondary infections were cured in 33%, response was good in 33% and fair in 25%. There was no response in 13% cases. Skin scrap test was completely negative in 83% cases and test was positive in 17% cases. Burning sensations were completely relieved in 43% cases; response was good in 17% cases and fair in 26%. There was no response in 13% cases (Table 4). Treatment with both formulations (oral and local) showed significant reduction in signs and symptoms and the present investigations suggest that therapeutic effect may be due to the growth inhibition of itch mite or scabical properties of herbal test drugs. It is further assumed that they may be eliminating fertilized ovum from the skin and correct the morbidity of blood (*Fassad-e-Khoon*) produced by *Sarcoptes scabiei*.

**Conclusion**
The efficacy of polyherbal formulations used in scabies were found to be very effective without any side effect(s) during and after study, and further exploration is required for more effective treatment on large scale. A clinical trial may also be conducted on higher doses to find out exact effective dose of these formulations.

**Acknowledgment**
The authors are thankful to Pathology Department of Majeedia Hospital, Madangeer, New Delhi.

**References**