

## Review Article

# Use of traditional herbal medicines in the treatment of eczema

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**Abstract** Use of traditional herbal medicines is very common in Pakistani society. It is more prevalent in villages and Cholistan desert areas where medical facilities are less available, so generally people rely on herbal treatments for their diseases. Mostly herbal remedies are very effective and have fewer side effects. In this review some commonly used herbal remedies for treatment of eczema are discussed. Unfortunately, research on herbal drugs in terms of controlled clinical trials in humans is scanty. Hopefully, clinical research in the herbals opens new avenues in therapeutics.

### *Key words*

Eczema, herbal medicines.

### **Introduction**

According to WHO reports, more than 80% people in Asia rely on traditional medicines for treatment of diseases. Such medicines are used for treating various chronic diseases including skin disorders and different infections.

The term 'traditional medicine' is a sum total of knowledge, skills and practices based on the theories, beliefs, and personal experiences indigenous to different cultures, that are used to maintain health, prevent disease spread, minimize disease or treat it completely both physical and mental wellness.<sup>1,2</sup> Not only in underdeveloped countries but also in developed countries a large proportion of population relies on the herbal remedies.

Herbal medicine is the most popular form of traditional medicine with a long history. The information is transmitted from one generation to another. Different herbs show variable therapeutic response. For example jujube extract is used orally by common people for treatment of eczema. In 90% cases, it was effective while in 10% it showed no effect. Same treatment showed very good efficacy in some individuals and had no effect in some other individuals.

Eczema is a disease characterized by severe intense itching, edema, lichenification and scaling. Both endogenous and exogenous factors can give rise to this inflammatory response.<sup>3</sup> Around 5% cases develop chronic eczema. Incidentally, no cure is available and mostly topical steroids are used which have a plenty of adverse effects. A large number of herbs are used by local people in the treatment of eczema. In this review, some commonly used herbs in the treatment of eczema are discussed briefly.

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## Plants famous for their efficacy in eczema

### 1. *Aloe vera*

*Aloe vera* is known in Pakistan as *quargandal*. It is a plant found in arid climate area (**Figure 1**). *A. vera* is a stemless succulent plant that grows to height of 60-100 cm. Leaves are thick and green-colored and have serrated margins and teeth-like horns. Flowers are produced in summer and are pendulous with yellow tubular corolla, 2-3 cm long.<sup>4,5</sup>

*A. vera* is used traditionally in many diseases. Externally, it is used for wound healing and soothing inflamed skin.<sup>6</sup> Internally, it is used as dessert<sup>7</sup> for relief of heart burns and indigestion,<sup>8</sup> liver disease like hepatitis,<sup>9</sup> diabetes mellitus,<sup>10</sup> hyperlipidemia,<sup>11</sup> and psoriasis.<sup>12</sup> Extracts of *A. vera* possesses antifungal and antibacterial properties.<sup>13</sup> In eczema its gel (**Figure 1**) is applied directly to eczematous parts of body. Due to its moisturizing effect, the skin becomes softer and wounds heal quickly. Many patients report reduction of symptoms of eczema like dryness of skin, scaling and improved quality of skin. Due to its antibacterial properties it prevents secondary infection also. In a randomized, double-blind clinical trial by Syed *et al.*<sup>14</sup> *A. vera* cream was compared with the placebo in 60 patients having mild to moderate chronic psoriasis. The cure rate was 83% with *A. vera* cream as compared to 7% with placebo.

### 2. Jujube

*Ziziphus jujuba* (jujube), known as red date or chinese date, is the most cultivated plant all over the world. It is a small deciduous tree; leaves are shiny green and broad, flowers are small and fruit is edible. When fruit is immature it is like apple while on maturing it shrinks to date size.<sup>15</sup> Fruit is used as snack. Medicinally it is

traditionally used for the relief of stress.<sup>16</sup> It also possesses antibacterial, antifungal, anti-inflammatory,<sup>17</sup> antioxidant and wound healing activity.<sup>18</sup> Extract of dried jujube is drunk before breakfast in Cholistan desert area. The indigenous people use it as a remedy for eczema although no scientific research is available in this regard. Long-term use improves complexion.

### 3. Indian penny wort

*Centella asiatica* (Indian penny wort), also known as *brahami booti*, has tremendous medicinal value. It is a small herbaceous annual plant native to Asia. Stems are slender in shape, leaves are reniform, green color with rounded apices. Flowers are red to pink in color. Fruit is reticulate.<sup>19</sup> Leaves are used as ingredient of salad. Indian penny wort is very famous because of its incredible healing activity. Due to its great healing activity it was used for leprosy in past. Its triterpenes have antioxidant effects and an ability to stimulate collagen synthesis in bones, cartilage and tissue regeneration.<sup>20</sup> Poultice of leaves is used for open sores.<sup>21</sup> Other uses reported are as relief for anxiety, insomnia, immunity booster, diarrhoea and gynecological disorders.<sup>22</sup> Indian penny wort is very famous in Chinese and Indian medicine system due to its miraculous effects in soothing skin, eczema, psoriasis and wound healing. Clinical trials regarding use of Indian penny wort in eczema are not available to support its traditional use.

### 4. Walnut

*Juglans regia* is long deciduous plant attaining the height of 25-35m, found in dense forest competition. It is light loving plant, requires full sunlight to grow. Leaves are large and alternatively arranged having prominent veins.



**Figure 1** *Aloe vera* plant and gel.



**Figure 2** Chamomile flower

Its leaves have astringent and anti-inflammatory properties. It is used as wash, compresses, paste or poultice for athlete's foot and other ring-worm infections, bed bug bites, eczema, acne, herpes, impetigo, leprosy and wounds. Crushed leaves can be rubbed on the body to repel insects.<sup>23</sup> Astringent tannins are important ingredients of



**Figure 3** Calendula flower

walnut leaves and these tannins cross-link with the skin cells enabling them to be resistant to allergies and diseases caused by microorganisms. Walnut extract also has excellent antioxidant activity, however, clinical studies regarding its use are not available.

## 5. Chamomile

*Matricaria recutita* (*chamomile*) is a daisy like plant (**Figure 2**). It is very famous for its tea which is used in sleep disorders often served with honey or lemon.

Traditionally it is claimed to be effective in the treatment of cardiovascular disorders, common cold, sleep, cancer and gastrointestinal disorders like gas and diarrhea. It is found to be effective in wound healing and skin inflammatory conditions, hence used in allergic conditions, atopic dermatitis and eczema. Flowers are used to make tea and liquid extracts, capsules and tablets. It is applied to skin in the form of ointment or cream.<sup>24</sup> Aertgeerts *et al.*<sup>25</sup> carried out a clinical trial in 161 eczema patients using cream made from chamomile extract. When compared with steroidal and nonsteroidal

creams, it was equally effective as steroidal cream and more effective than non steroidal cream.

## 6. Rosemary

*Rosmarinus officinalis* (rosemary) is a perennial herb with a needle like leaves. Leaves are evergreen and flowers are variable in color ranging pink, purple, white and blue. It is grown for its fragrance and flavor.<sup>26</sup> It is traditionally used as memory enhancer. Due to antioxidant and cleansing properties, it is also used in eczema. It reduces skin inflammation and improves blood circulation. Its volatile oils have camphorated smell which relieves stress and on adding to bathwater or message to body relieves the scaling of skin and eczema. Clinical trials with special reference to eczema were not found.

## 7. Turmeric

*Curcuma longa* is a rhizomatous perennial plant of ginger family employed as an important ingredient of cooking in Asian countries. Due to its yellow colour it is also used as a dye. Turmeric has been widely researched and found to have plenty of uses. Important uses are in cancer, diabetes, asthma, anemia and intestinal disorders. In dermatology, it has magnificent wound healing activity. A medicinal paste of turmeric (turmeric powder mixed with sweet lime juice and salt) is applied on sprain swellings. This paste gives quick and long lasting relief. Powder of turmeric is sprinkled on wounds/ulcers for speedy healing. It is an antiseptic and stops bleeding and heals the cut or burn. Turmeric has antioxidant, antiviral, antibacterial, anti-inflammatory and antiseptic properties. It does not irritate the stomach as do many Cox-2 inhibitors.<sup>23,27</sup> It also improves skin complexion and is one of the ingredients of *ubtan* used by brides for fairness. Although

widely used by people, research literature regarding eczema is lacking.

## 8. Licorice

*Glycyrrhiza glabra* is an herbaceous perennial legume having pinnate leaves and long flowers. Its root is used traditionally for the treatment of cough. It is reported to have hepatoprotective, antiviral, anti-ulcer and laxative effects.<sup>28</sup> It inhibits growth of *Helicobacter pylori* so helps in the healing of stomach and duodenal ulcers.<sup>29</sup> In a double-blind, placebo-controlled study, the efficacy and safety of *G. glabra* was assessed by Saeedi *et al.*<sup>30</sup> in 30 patients of eczema. Different concentrations of licorice extract in gel formulation were used for 2 weeks and clinical parameters like erythema, itching, scaling and edema were assessed according to a four-point scale: absent=0, mild=1, moderate=2, severe=3. It was observed that 1% and 2% gel containing licorice extract gave better result as compared to placebo in reduction of erythema, itching and edema after one and two weeks. However, licorice extract gel did not show any improvement in the scaling. Among two formulations, 2% showed better results at the end of 2 weeks. No side effects were shown by patients.<sup>30</sup>

## 9. Calendula

*Calendula officinalis* is a daisy like perennial herbaceous plant; commonly called marigold as it turns towards sun (**Figure 3**).<sup>31</sup>

Traditionally, it is used for acne, eczema, abdominal cramps and as anti-inflammatory agent. Its hydroalcoholic extract in rabbit jejunum showed spasmolytic and spasmogenic effects hence its use in abdominal cramps and constipation.<sup>32</sup> Another study in mice showed its antitumor activity. Its extract showed anti-

inflammatory and antiviral effects, as well.<sup>33</sup> On topical use as cream or ointment, it is effective in reducing dermatitis, acne, inflammation, bleeding, soothing skin and radiation damage.<sup>34,35</sup>

## 10. Henna

*Lawsonia inermis* is a tall flowering shrub whose leaves are opposite and have depressed veins on the dorsal surface, and fruits are small in size. It is a plant of hot climate and temperature below 5<sup>0</sup>C kills henna plant. It is used from ages for dyeing skin, hair, nails and cloth. It possesses antifungal and emollient action.<sup>36</sup> Henna has antifungal, anti-inflammatory, analgesic and soothing properties.<sup>37</sup> In a clinical trial Nawab *et al.* treated 30 patients of eczema with compound formulation of *Olea europea*, *Lawsonia inermis* and *Nigella sativa* and noted improvement in signs and symptoms of eczema.<sup>38</sup>

## Conclusion

There is a need for more *in vitro* and *in vivo* studies to evaluate and validate the efficacy and safety of these herbs in the present era of evidence-based medicine. It is expected to open new horizons in therapeutic field.

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