



**TRADITIONAL USES OF HERBAL POTENTIAL FOR THE TREATMENT OF RHEUMATISM IN  
RAEBARELI DISTRICT (UTTAR PRADESH)**

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**ABSTRACT**

The present study has been carried out among rural communities inhabited in different areas of the Raebareli district (Uttar Pradesh) during 2008 to 2009 suffering with rheumatism. The aim of the study was to explore and document herbal plants including inherent medicinal potential to be used in human healthcare practices, especially to cure rheumatism a most common but serious health problem of mankind. Total 32 plant species belonging to 26 families are identified which have been employed by the rural community of the study area to get rid of from this very popular problem. Voucher specimens of cited plant species were collected and identified following standard procedures of herbarium preparation and consulting relevant reputed flora. The plants have been enumerated with botanical names followed by local name, family, plant parts used, mode of administration and uses.

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**INTRODUCTION**

Medicinal plants are the natural heritage with global importance. It plays an important role in rural and local people of developing countries, since time immemorial, to ameliorate the sufferings of mankind. About 80% of the populations of most developing countries relies on herbal medicines for their primary healthcare needs (Poonam and Singh, 2009; Rai and Lalramnghinglova, 2011). The widespread use of herbal remedies and healthcare preparations obtained from commonly used traditional herbs and medicinal plants have been traced to occur as natural products with medicinal properties. Herbal remedies are becoming popular in the treatment of various ailments on account of the increasing cost of allopathic medicines and their side effects. Few decades ago medicinal plants were used by rural and tribal communities only, but now a day, they are the first choice throughout the world for healthcare. Recently, the demand of medicinal plants has increased considerably in local and global levels leading to overexploitation of these valuable plants. These socio-economic changes coupled with environmental factors have resulted threat to existence of many high-demanding medicinal plants worldwide. In this perspective, it is essential to make the complete inventory of the medicinal flora, monitoring and assessment of respective plant species in their natural habitats are very relevant to assist their conservation for sustainable use (Malik *et al.*, 2011). The conservation of the threatened and endangered medicinal plant species in the wild is indispensable (Rahman *et al.*, 2004).

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Rheumatism is a serious health problem of human society widely spread all over the country. It makes human beings worthless to survive in their dwelling sites. Rural people of Raebareli district have been endowed with a rich knowledge of medicinal plants, especially for treating ailment like rheumatism. People of the district are basically poor and solely engaged themselves in agricultural practices.

**MATERIALS AND METHODS**

District Raebareli is located at 25° 49' N and 26° 36' N latitude and 100° 41' E and 81° 34' E longitude with an area of 4609 sq. Km. at an elevation of 120.4 to 86.9 m above sea level and occupies central part of the Uttar Pradesh, stretched as far as foothills of the Himalayas in the north and as far as the Ganga river in the south. The study involves extensive field surveys and critical study of plant specimens during July, 2008 to June, 2009. Regular field trips were made in such a way so as to cover all the areas of the district as regular intervals in different seasons of the year. The information was collected on various aspects of medicinal plants through interviews and discussions among rural people, herbal practitioners, traditional healers and senior denizens in and around the study area. Most of the information was gathered from the elderly people from the age group 45-70 (80% men and 20% women) who have a very long acquaintance with usage of plants. The information thus gathered was cross-checked adequately for reliability and accuracy by interacting with different groups of dwellers from different habitats of the study area. A no. of group discussions was conducted during the period of investigation. All the plant specimens were collected during the maturity stage in flowering and fruiting conditions.

Information about the plants were recorded with regards to their correct botanical name, vernacular name, family, plant parts used, preparation of medicine either individually or in combination with other plant parts and mode of administration for the treatment. Collected information regarding to medicinal properties of plants were considered valid if it is supported by at least 10 independent users and five local practitioners. Plant specimens were collected during the study with field notes and preserved in the form of herbarium following Jain and Rao (1977), identified with the help of reputed flora (Duthie, 1960; Hooker, 1973; Singh, 1991) and photographed. Voucher specimens were deposited in the herbarium in the Department of Botany, T.D.P.G. College, Jaunpur, Uttar Pradesh.

## RESULTS AND DISCUSSION

The present investigation reveals that rural communities of Raebareli district use 32 plant species belonging to 26 families for the treatment of rheumatism. Among them 15 herbs, 7 shrubs, 6 climbers and 4 trees were identified. Medicines are prepared in the form of oil extracts, paste, powder, decoction and juice. The plant parts used for remedial preparations are mostly leaves, roots, bark, shoots, rhizome, flowers, fruits and seeds. Sometimes whole plant is utilized for the medicinal preparations. Plants used by the rural communities of the study area for the treatment of rheumatism are enumerated as follows:

### *Abrus precatorius* L. (Fabaceae), Ratti

Warm seed paste is applied over the affected joints twice a day until relieved from stiffness of joints.

### *Aloe vera* (L.) Burm.f. (Liliaceae), Ghritkumari

A longitudinal cut is made on a leaf in such a way as to expose the mesophyll. The exposed part is heated for a while on a low flame. Warm mesophyll content is rubbed on the affected part and is repeated for 15 days to reduce the swelling in the joints.

### *Anisomeles indica* (L.) Kuntze (Lamiaceae), Pan-tulsi

Fresh leaves and young stems are boiled in neem oil along with poppy seeds and garlic in an earthen pot for 15-20 minutes in a low flame. The filtered oil is applied externally on the joints of the hands and legs. A gentle massage is applied for 20 minutes and hot bath is advised after this application. Consumption of fish, meat, egg and sexual activity are prohibited for 3 weeks. A handful of leaves are boiled in steam and used to treat the affected parts until there is relief from rheumatic complaint.

### *Azadirachta indica* A.Juss. (Meliaceae), Neem

Seed oil is massaged over the joints to reduce rheumatic pain. Stem bark decoction is taken orally for 3 weeks to treat rheumatic complaints.

### *Calotropis gigantea* (L.) R.Br. (Asclepiadaceae), Shivtarak

A poultice of roasted leaves is applied on the rheumatic joints for 1 week or more to reduce pain and swelling.

### *Capicum annuum* L. (Solanaceae), Mircha

Paste made from fruits of mircha, ginger and garlic is given orally to women after delivery. This is followed by the administration of honey to prevent rheumatic complaints.

### *Cymbopogon citratus* (DC.) Stapf. (Poaceae)

Whole plant decoction in water is used during bath twice a day for 10 days as treatment of rheumatism. Fresh filtered leaf juice is given orally as an effective remedy of rheumatism.

### *Datura metal* L. (Solanaceae), Kala dhatura

Leaves soaked in boiling water are bandaged over the affected part to get relief from rheumatic pain. The boiled leaves are also used for fomentation on the rheumatic swelling for 15-20 minutes.

### *Eclipta prostrata* (L.) L. (Asteraceae), Bhringraj

Stem and leaves boiled in coconut oil is cooled, filtered and applied on head for an hour before bath to reduce body heat.

### *Hemidesmus indicus* (L.) Schultes (Asclepiadaceae), Anantmul

Fresh roots boiled in coconut oil with cumin seeds on moderate flame is filtered after cooling. The filtered oil is applied on the affected part for relief from burning sensation during rheumatism. One tea spoon of shade dried root powder is added to lukewarm water, filtered and taken orally twice a day for 5-7 days for relief from rheumatic complaints.

### *Justicia adhatoda* L. (Acanthaceae), Adusa

A handful of leaves is cooked and used for a fomentation on the affected joint to alleviate rheumatic pain.

### *Mimosa pudica* L. (Mimosaceae), Lajwanti

Lukewarm oil prepared from fresh leaves crushed and boiled in a mixture of sesame oil and neem oil on a low flame is massaged on the affected joints. Hot water bath is administered. The whole plant paste is applied on the inflamed joints once in a day to get relief in rheumatic complaint.

### *Murraya koenigii* L. (Rutaceae), Meethi neem

Fresh leaf paste prepared with a little water is warmed for few minutes and bandaged on the affected part in the morning and the patient is advised hot water bath in the evening.

### *Sansevieria roxburghiana* Schultes & Schultes (Agavaceae)

Chopped leaves, garlic, onion, sahijan bark and mustard seeds are boiled in neem oil on low flame. The lukewarm oil is massaged by applying medium pressure on hands and legs to get relief from pain.

### *Scoparia dulcis* L. (Scrophulariaceae), Mithi booti

Powdered mixture of shade dried leaves of the plant, neem leaves and a piece of turmeric is consumed with honey on an empty stomach before breakfast to treat rheumatism. Use of tamarind should be avoided.

### *Tinospora cordifolia* (Willd.) Miers ex Hk.f. & Th. (Menispermaceae), Gurch

Juice of the plant is boiled in neem oil together with seeds of cumin, pepper and mustard, dried ginger, garlic and crushed stem bark of sahijan on a low flame for 15-20 minutes. The lukewarm medicated oil is massaged on the affected part by applying soft pressure for 30 minutes for 7-10 days to get relief in rheumatic pain. Hot water bath is administered after the massage.

***Elephantopus scaber* L. (Asteraceae), Jhumka**

Shade dried leaf powder is taken orally with one and a half tea spoon of honey in the morning on an empty stomach for 2 weeks to treat joint pains.

***Syzygium heyneanum* Wall. Ex Gamble (Myrtaceae), Kath jamun**

Powder made from equal quantity of shade dried leaves, flowers and tender fruits are consumed with honey for the treatment of rheumatism. Consumption of fish and egg is avoided.

***Amaranthus viridis* L. (Amaranthaceae), Mersa**

Sap of whole plant mixed with mustard oil is massaged over the joints to treat rheumatic complaints.

***Argemone mexicana* L. (Papaveraceae), Satyanasi**

Plant juice is applied externally over the affected parts to treat rheumatic pain.

***Asparagus racemosus* Willd. (Liliaceae), Satawar**

20 ml water extract of root is given orally twice a day for the treatment of rheumatism.

***Cissus quadrangularis* L. (Vitaceae), Harjor**

20 gram pounded stem parts boiled with one tea spoonful mustard oil is used on the joints to remove rheumatic pain.

***Curcuma domestica* L. (Zingiberaceae), Haldi**

5 gram rhizome powder boiled in milk is given orally twice a day in the treatment of rheumatism.

***Cuscuta reflexa* Roxb. (Convolvulaceae), Amarbel**

Whole plant coated with mustard oil is warmed and applied over affected joints to get relief from rheumatic complaint.

***Dioscorea bulbifera* (Dioscoreaceae), Ratalu**

Root paste is given orally twice a day for 10-12 days to get relief from rheumatic pain.

***Ipomoea fistulosa* Mart. Ex Choisy (Convolvulaceae), Bahaya**

Leaf coated with mustard oil is warmed and applied over the affected and inflamed swellings to reduce rheumatic pain.

***Madhuca indica* Gmelin (Sapotaceae), Mahua**

Pounded bark is used orally twice a day for the treatment of rheumatism. Decoction of bark is taken orally in rheumatism. Flower paste is warmed and applied over the affected joints to get relief from swellings and rheumatic pain.

***Nyctanthes arbour-tristis* L. (Oleaceae), Harsingar**

Leaf paste prepared with black pepper powder is made in to tablets is given orally twice a day for 5-10 days to treat rheumatic complaint.

***Urena lobata* L. (Malvaceae), Bachita**

Fresh leaf paste is prepared and applied externally to relieve rheumatic pain.

***Vanda tassellata* (Roxb.) Hook Ex G.Don (Orchidaceae), Banda**

Fresh leaves coated with mustard oil is warmed and applied over affected joints to reduce the swelling in the joints and rheumatic pain.

***Vitis vinifera* L. (Vitaceae), Angoor**

5 gram root powder is used orally twice a day to prevent rheumatic complaints.

***Withania somnifera* (L.) Dunal (Solanaceae), Ashwagandha**

Fresh leaves are used as poultice twice a day over joints to reduce swelling and pain of joints. 5 gram root powder is taken orally twice a day to treat rheumatic pain.

Plant species like *Abrus precatorius* L., *Justicia adhatoda* L. and *Withania somnifera* (L.) Dunal growing in the study area is found to be endangered due to over-exploitation by rural communities in especially medicinal purposes. It is well established that an identical use of the same plant species by rural communities of different localities or areas indicates its curative property and therapeutic significance. The comparison of medicinal claims between different rural communities of the same area or neighbouring areas has proved to be very rewarding. Comparative studies on the medicinal uses of plants among different communities residing in different localities showed similarities and dissimilarities also in uses. The medicinal plants listed here are locally available and easily accessible and thus provide a cheaper treatment as compared to modern allopathic drugs. The only limitation is the seasonal availability of certain plants, for which rural people have acquired different ways to preserve them for other season use. The herbs are the primary source of medicinal plants in terms of the number of species followed by shrubs, climbers and ultimately tree species. This is perhaps because they are abundant and it is believed that the more abundant a plant is, the more medicinal virtues it may possess. The ease with which bioactive compounds can be extracted is also factors that contribute to the preference of herbs. The study area is rich in medicinal plant resources. An attempt was made to collect information on the traditional medicinal knowledge for the treatment of rheumatism present with the local rural of the study area.

It is evident from the interviews conducted during study, knowledge of medicinal plants is limited to traditional healers, elders and village men who are living in rural areas. Due to lack of interest among the new generation as well as their charms towards cities for lucrative jobs, there is possibility of losing this wealth of traditional knowledge in future. Thus there is an urgent need to preserve this cultural heritage of the natives through proper documentation based on scientific validation of reported claims (Abbasia *et al.*, 2010). It is not only essential to conserve such a wealth of information and wisdom found among the rural communities but will also be rewarding to ensure such details and devise by which a modern biomedical system meet the ever increasing clinical requirements of modern living. In addition, medicinal plants may provide huge opportunities for community development, livelihood improvement and poverty alleviation (Kapoor, 2012). Therefore, an integrated effort is necessary to save the treasure house of medicinal plants for sustainable service of mankind.

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