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## Ethnomedicinal plants uses to cure different human diseases by rural and tribal peoples of Hathras district of Uttar Pradesh

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### Abstract

The manuscript mainly deals with the use of certain medicinal plants as folklore medicine by tribal communities of Hathras district. These plants are abundant everywhere at Hathras. The present study highlighted the use of 20 plants species as folklore medicine providing details about the plants, preparation of drugs and their uses as folklore medicine by the ethnic groups.

**Keywords:** Folklore medicine, jaundice, diabetes, malaria, dysentery, diarrhoea, tonsillitis

### 1. Introduction

Northern region of India is one of the biodiversity rich region of the world. A good number of known and unknown medicinal plants are abundant in the forests of this region. There are various herbs, shrubs and trees, which are frequently used as folklore medicine by the local inhabitants. The useful medicinal plants according to the users are highly efficacious as medicine against some common diseases and other health problem of man. Present paper mainly deals with the 20 plants species that are used as folklore medicine by various ethnic groups has been reported from Northern region of India (Singh *et al.*, 2003) [6]. The climate of Hathras area is warm, cold and humid type with maximum temperature 47.5 °C in summer and minimum temperature 5 °C in winter. The soil is acidic sandy loam in nature and in rainy season with high rainfall.

### 2. Materials and Methods

The study was conducted in 18 villages of Hathras district (U.P.) about 800 families of tribal communities dominate 10 villages and about 400 families of tribal communities dominate other 8 villages most of the families are from below poverty level. They are very popular with the folklore medicine. Tribal and rural peoples of Hathras district are uses certain medicinal plants like: *Aloe vera* Linn. (Liliaceae), *Asparagus racemosus* Linn. (Liliaceae), *Ageratum conyzoides* Linn. (Asteraceae), *Azadirachta indica* Linn. (Meliaceae), *Cuscuta reflexa* Roxb. (Convolvulaceae), *Ocimum sanctum* Linn. (Lamiaceae), *Ricinus communis* Linn. (Euphorbiaceae), *Withania somnifera* Dunal (Solanaceae), *Vinca rosea* Linn. (Apocynaceae), *Madhuca indica* Linn. (Sapotaceae), *Rauwolfia serpentina* Benth. (Apocynaceae), *Nyctanthes arbor-tristis* Linn. (Oleaceae), *Argemone mexicana* Linn. (Papaveraceae), *Abrus precatorius* Linn. (Fabaceae), *Cannabis sativa* Linn. (Cannabinaceae), *Terminalia arjuna* Roxb. (Combretaceae), *Moringa oleifera* Lam. (Moringaceae), *Tribulus lanuginosus* Linn. (Zygophyllaceae), *Emblica officinalis* Gaertn. (Euphorbiaceae), *Pongamia pinnata* Linn. (Papilionaceae), etc. as medicine against common diseases like jaundice, diabetes, malaria, bronchitis, diarrhoea, dysentery, tonsillitis and health care and like injury, bone fracture, etc. The information were gathered through interaction with the rural and tribal peoples and the users separately. The plants were collected and cultivated in the forest area and agricultural lands of Hathras district and identified with the help of good publications Kanji lal *et al.* 1969; [4] Jain, 1968 and 1987; [2-3] Chopra *et al.* 1956 [1].

### 3. Results and discussion

Twenty medicinal plants commonly called as folklore medicine by rural and tribal peoples of Hathras district (U.P.) are described below:

1. *Aloe vera* Linn. belongs to Liliaceae family is a parental ornamental herb are fleshy and about 30-45cm long, margin spiny. The plant is locally known as Leaves. Leaf juice is highly efficacious to kill or expel worms from the body. Leaf juice is also used against piles and urinary diseases. Gelatinous matrix of leaf is used as hair tonic and skin cure.

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2. *Asparagus racemosus* Linn. belongs to family- Liliaceae, is a perennial twinner of terrestrial habitats of Hathras grows preferably in sandy loam soil. It is a beautiful garden plant and cladodes are succulent and deep green. The fasciculated cluster of succulent roots make a good identifying characteristics. The plant is locally known as Satmuli. Root juice used to increase secretion of milk in lactating mothers. It is also efficacious against dysentery, blood diseases, eye, throat and paralysis.
3. *Ageratum conyzoides* Linn. plant belongs to family- Asteraceae is an annual weed of all types of terrestrial habitats of Hathras. It grows throughout the year and rainy season is best season for luxuriant growth. The plant is locally known as Gandhalibon. Root juice is highly efficacious against dysentery. Paste of fresh leaves is externally applied to prevent bleeding from cut injury and it stops bleeding immediately.
4. *Ocimum sanctum* Linn. plant belongs to Lamiaceae family and commonly known as *Tulsi*. It is an annual weed of all types of terrestrial habitats. Leaf juice is used against Asthma and cough in children with honey and mixed with lemon juice to cure ring worm infections. Seeds are used to cure diabetes and disorders of genito urinary tract. Root extract is used as diaphoretic in malarial fevers. Whole plant is used in snake bite and scorpion sting.
5. *Vinca rosea* Linn. plant belongs to the family- Apocynaceae is a perennial medicinal herb. The plant is locally known as *Nayantara* or *Sadababar*. The leaf juice is highly efficacious against diabetes.
6. *Madhuca indica* Linn. plant belongs to Sapotaceae family and commonly called as *Mahua*. It is a medium to large sized deciduous tree upto 17m height. Flowers are used as cooling agent and tonic for the treatment of acute and chronic tonsillitis, helminthes, eye disease, flowers mixed with milk are useful in general debility. Juice of flowers is used as treatment of skin diseases. Leaves are used for the treatment of bronchitis. Bark is a good remedy for itch, swelling, fractures and snake bite poisoning as antidote, in diabetes, tonsillitis, leprosy, fevers. Externally the seed oil used in massage is very effective to alleviate pain, in manufacturing of soap and cooking purposes. Acetone and ethanol extracts of leaves used against Ascites carcinoma cell lines as anticancer activity.
7. *Withania somnifera* Dunal plant belongs to the Solanaceae family and commonly called as *Ashwagandha*. Root extract are used for the treatment of aphrodisiac, sedative, rejuvenative, chronic fatigue, bone weakness, debility. Leaves are used as a hypnotic and treatment of asthma, anticancer and antioxidant activity. Seed are diuretic and can be used as a substitute for rennet curdle milk. Roots, leaves and bark has a potential role in the treatment of cancer therapy, inhibitory of human humercul lines, anticarcinogenesis activity, abcticsarcoma in skin carcinoma in rats, anti-oxidative and chemoprotective activity. Roots and leaves are used as tonic, abortifacient, mental problem, arthritis, depression, memory loss, hormonal imbalance, etc.
8. *Rauwolfia serpentina* Benth. plant belongs to the family- Apocynaceae and commonly called as *Sarpagandha*, is erect evergreen undershrub upto 15-45cm in height. Root extract are used for the treatment of intestinal disorders, diarrhoea, dysentery, anthelmintic, cholera, colic, hypertension, fever and sedative. Juice of leaves has been used as a remedy for opacity of cornea. Hindu used this plant for centuries as a febrifuge and as an antidote to the bites of poisonous reptile snakes.
9. *Azadirachta indica* Linn. plant belongs to family- Meliaceae and commonly called as *Neem*. Leaves extract and seed oil is applied to whole body for 5 days to cure small poxes and skin diseases.
10. *Nyctanthes arbor-tristis* Linn. belongs to family- Oleaceae and commonly called as *Harsingar*. Fresh juice of whole plant is given with honey in chronic fever and with a pinch of salt in the treatment of rheumatism. Leaves extract are used as decoction, in obstinate sciatica while fresh juice mixed with sugar given to children for expelling intestinal worm.
11. *Argemone mexicana* Linn. plant belong to the family- Papaveraceae and called as *Peelikateli*. Latex of plant are medically used in the treatment of dropsy, jaundice and eye troubles. Seed oil is used for burning purposes.
12. *Abrus precatorius* Linn. plant belong to Fabaceae family and commonly called as *Ratti*. Seeds are used for weight by Indian Goldsmith. Seeds are purgative tonic, nervous system disorder and cattle poisoning. Seeds poulties are used as abortion. Leaves extract are used for the treatment of skin diseases.
13. *Cannabis sativa* Linn. plant belong to the family- Cannabinaceae and commonly called as *Bang* or *Ganja*. Paste of leaves are used for the treatment of curing piles while leaves is also used for nacotic purposes in rural peoples.
14. *Terminalia arjuna* Roxb. plant belongs to family- Combretaceae and commonly called as *Arjun*. Bark extract is used for the treatment of tonic as astringent and also useful in heart diseases. Bark is also used as antidote to poisonous scorpion and in reducing blood pressure. Leaves are used to cure styptic, anti-dysentric, expectorant, tonic, febrifuge and hypotensive diseases.
15. *Moringa oleifera* Lam. plant belongs to the family- Moringaceae and commonly called as *Sainjna*. Medically the root extract is used for the treatment as stimulant in paralytic affections epilepsy, polsy and rheumatism, as a tonic of cardiovascular system, in fainting giddiness, nervous debility and hysteria. Leaves juice is used for the reduce high blood pressure. Fruit are used in liver, spleen, joint pains, tetanus and paralysis diseases. Fried flowers are used for preventive small poxes. Seed oils is used as external application in rheumatism and venereal diseases. Gum are used for curing dental caries and mixed with sesam or til oil, chopped into the ear for curing otalgia diseases.
16. *Tribulus lonuginous* Linn. plant belongs to family- Zygophyllaceae and commonly called as *Gokhuru*. Fruits are in the form of infusion and leachate is useful as a diuretic and also used in kidney diseases and stone.
17. *Ricinus communis* Linn. plant belongs to the family- Euphorbiaceae and commonly known as *Arand* or *Erendi* is an evergreen shrub. Medically the seed oils are used in skin diseases and leaves are used after the treatment in silkworm. Seeds are used in scorpion string and fish poison. Leaf are applied to the head to relieve headache and as poultice for boils.
18. *Cuscuta reflexa* Roxb. plant belongs to Convol vulaceae family and commonly called as *Amaravelea* or *Akasbel* is a parasitic climber. Plant are purgative and used externally against itching, internally in protracted fevers. Stems are used in bilious disorders. Plant contains cusutalin and cuscutin, cusculatin pharmacologically

potent drug. Seeds contain pigments amarbelin and cuscutin and a wax and yielded a semi drying oil. Hence forth the parasite goes on flourishing entirely at the expense of the host. It is used in veterinary practice for poultice on sprains.

19. *Emblica officinalis* Gaertn. plant belongs to the family-Euphorbiaceae and commonly called as *Amla* is medium sized tree. Dried fruit are useful in haemorrhobia, diarrhoea, dysentery, in anaemia and jaundice. Exudation from incisions on the fruit are used as external application for the inflammation of the eyes. Seeds are used for asthma, bronchitis and biliousness. Fruit have rich source of Vitamins-C and successfully used in the treatment of human scurvy. The fruit is eaten raw or pickled purposes and also used in medicine and for tanning.
20. *Pongamia pinnata* Linn. plant belongs to Papilionaceae family and commonly called as *Karanj* is a moderate sized evergreen tree. Seeds oil are useful in cutaneous infections, herbs, scabies and rheumatism. Seeds and roots are used as fish poison. Fresh bark is used internally in bleeding piles. Leaves are used in the form of a poultice applied to ulcers infested with worms. Root extract is used for closing fistulous sores and cleaning foul ulcers. Seeds are externally used in a large number of skin diseases.

Tribal and rural communities of Hathras district of Uttar Pradesh are used many plants as folklore medicine. The rural and tribal peoples are very conscious about the use of these medicinal medicines. Common peoples have a specific have a specific mind set about the faithfulness of the folklore medicine. Out of 20 species of medicinal plant described in the present investigation for their medicinal properties Kirtikar & Basu (1918) [5]. It was observed during the study that the tribal and rural communities of Hathras district have more or less common stock of folklore medicines. Preparation and use of the drugs between the tribal and rural communities is assumed because of the availability of materials and the tolerance against the drug by the users. The folklore medicine has been playing an important role for curing various ailments among these indigenous people from time immemorial.

Tribal, rural and urban peoples of Hathras district (U.P.) widely use certain native plants as traditional medicine. The awareness campaign should be organized with appropriate strategy, conserving biodiversity should be percolate to the grass root level. The intellectual property on the folklore medicine should be protected and re-evaluated. The exchange of knowledge of medicinal plants and ethno-medico botanical culture should be advanced. The proper emphasis should be given to identify the keystone species of the ecosystems of Hathras district of Uttar Pradesh and it should be conserved to protect the endangered species of medicinal plants and other valuable species of plant.

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