



HERBAL CONTACT THERAPY PRACTICED BY THE ETHNIC PEOPLE OF INDO-NEPAL BORDER OF PILIBHIT TIGER RESERVE (PTR), INDIA

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Indo-Nepal sub Himalayan International border region of Pilibhit Tiger Reserve is situated in the vicinity of forest of Pilibhit district of Rohilkhand division of Uttar Pradesh state of India. Study area is inhabited by Tharu tribal people. Tharu persons are well cultured and have deep faith in supernatural powers of certain wild plants which are associated with taboos, safety from evil powers and protection from different diseases. Various parts of plants like roots, stem, leaves, fruits, seeds etc. to cure different ailments through contact therapy are practiced by the Tharus. This therapy is chiefly based on magico-religious beliefs. This belief may be due to certain alkaloids present in the particular plant part. In this manuscript 30 plant species have been enumerated as found used in contact or touch therapy practices by various ethnic and rural people of the study area.

Key words: Ethnic people, Pilibhit Tiger Reserve (PTR), Touch therapy.

Relationship between plant and animals is as old as human civilization. History reveals that most of the tribal communities of the world are based on conventional agriculture, or hunting and gathering (Balasubramanian 2003, Shiva and Vakshasya 2004). As the time passes, they have developed vast knowledge on the use of plants and plant products for curing several human and veterinary ailments (Singh 2000, Tomar 2008). They have unconditional belief in their native and generation old folklore knowledge about herbal medicinal practices for sure cure of various health problems (Dixit and Vakshasya 2019). Rich diversity of flora and fauna in the study area has provided an advantage to its inhabitants for developing their own traditional knowledge for the treatment of most of diseases (Dixit 2004, 2018).

Contact or touch therapy is an age old treatment practice of many ethnic and rural communities of the world. This traditional practice involves magical cure of many common diseases where whole plant or plant part even kept in touch with the skin of diseased one (Hembrom 1996). Plant or its parts are either tied over the fore arm or garlanded in the neck by an experienced person of ethnic and rural community (Satya 2014). After the therapy patients get relief from

a particular disease. This magical effect may be due to secretion of certain photochemical from the plant part in touch with patient.

As touch therapy is not common among civilized population, hence a little work has been done so far on this generation old traditional system of disease cure. In India, very few studies have been found on this aspect. However, preliminary work has been carried out by Vakshasya and Dixit (2011) in the Rohilkhand division of Uttar Pradesh state but not specifically on Pilibhit Tiger Reserve (PTR) area. Keeping in mind the above fact, the present study has been carried out to highlight plants used in touch therapy by ethnic and rural people of PTR for the cure of many human as well as veterinary diseases.

Study area: The study area mainly comprise of Pilibhit district in the vicinity of forests around Pilibhit Tiger Reserve. Tharu is the main tribal community, living in and around dense forest area. Pilibhit lies between 28° 54' N and 28° 60' N latitude and 79° 37' E and 88° 27' E longitude, having an area of 3765.7 sq km, of which about 23 % part (roughly 310 sq km.) is occupied by natural forest. In this area temperature ranges from a minimum of 10° C in winter to a

maximum of 43^o C in summer with relative humidity ranging from 49 to 67 % in different seasons. There is a great variation in annual rainfall and also in number of rainy days in a year. The rainfall and productive alluvial soil is the main factor which control the distribution of variable forests like that of evergreen, deciduous, grassland and swamp type on which tribal and rural people directly and indirectly depends for their livelihood.

MATERIALS AND METHODS

The study was undertaken through field study carried out during the period of October 2017 to April 2019 in the tribal dominating villages and localities which are popularly called Tharu hats. First hand information about the use of plants in the touch therapy practices was collected from the traditional tribal medicine men (Bharras) and other herbalists of the study area. As far as the collection of responses was concerned, most of the respondents were in the age group between 45 to 70 years and 80% of them were male. Interestingly most of Bharras were denied to reveal identity and source of plants but few of them agreed to show those complete plants that parts like stem, roots, leaves or seeds were used in contact therapy treatments. Herbalists and experienced rural people also provide very interesting and meaningful information about many wild plants used in contact therapy of different diseases. They helped us in the collection of these plants growing nearby them. In this process of gathering of information, selection of informants was done randomly to fill-in questionnaire (Jain and Rao 1977).

During the field visits, plants were collected possibly in flowering stage and relevant data concerning its method of use, plant type, local name, plant part used and mode of administration have been recorded. Plant specimens were collected and processed for herbarium preparation and further studies (Jain and Rao 1977). Collected plant specimens have been identified with the help of standard literature and published flora (Duthie 1973,

Saini and Singh, 1990). Voucher specimens have been deposited in the department of Botany, Upadhi PG College Pilibhit, India. Plants used in the contact therapy are enumerated alphabetically in the table along with their local names, family, habit, plant part used, disease cured and method of administration (Table 1).

RESULTS AND DISCUSSION

Touch or contact therapy is one of the unique, natural and totally safe healthcare practice of them, not having any contraindications (Sen and Bahera 2007). Therefore, local people and ethno botanists are keen to document this indigenous knowledge on touch therapy for future use as well as introduce valuable therapeutic practices of these wild plants (Dixit and Dixit 2008).

In the present study, about 30 medicinal plant species of 27 genera were enumerated (Table 1). Few of them are vulnerable also. Altogether, about 25 types of ailments have been reported to be cured by using these 30 plant species among the ethnic and rural communities of the study area. Most common diseases cured are jaundice, boils, diarrhea, vertigo, joint pain, epilepsy, goiter, tooth ache, hypertension, skin diseases, rheumatism and infertility. Few of the treatment practices are very unique and new to the civilized societies which are recommended for future research in different pharmacopoeia.

It was observed in the present study that the target group of the study area has tremendous knowledge about the medicinal usages of the plants growing nearby them. Pilibhit is a small district with limited medical facilities, that too in the city area. The people residing in the outskirts in the vicinity of forests of the Pilibhit Tiger Reserve (PTR) still rely heavily on the plant based natural and traditional remedies for the treatment of many ailments. Traditional knowledge is chiefly based on the findings of their generations' long ethical practices through repeated trial and error methods. Interestingly, a combination of

Table1. Ethnomedicinal Plants Used in Contact Therapy by Ethnic people.

S. No.	Name of the Species	Family	Habit	Habitat	Part Used	Disease Cured	Method of Administration	Conservation status
1.	<i>Abrus precatorius</i> Linn. (Goonj)	Fabaceae	Climber	Roadside weeds	Root	Dental caries	A piece of the root is used around the ear.	Common
2.	<i>Abutilon indicum</i> (Linn.) Sweet (Kanghi)	Malvaceae	Under Shrub	Wild	Root	Miscarriage	Root tied on the wrist of pregnant women.	Common
3.	<i>Achyranthes aspera</i> Linn. (Chirchita)	Amaranthaceae	Herb	Open Land	Root	i) Delayed delivery ii) Goitre	i) Root tied to the wrist of expecting mother. ii) Root hung around neck.	Common
4.	<i>Aegle marmelos</i> (Linn.) Correa (Bel)	Rutaceae	Tree	Cultivated	Root	Diarrhoea	Root tied on the right wrist	Common
5.	<i>Allium cepa</i> Linn. (Pyaz)	Amaryllidaceae	Herb	Cultivated	Bulb	Nasal bleeding	Smell of fresh bulb is used	Common
6.	<i>Aloe vera</i> Linn. (Ghwarphatta)	Asphodelaceae	Herb	Cultivated	Whole plant	Jaundice	Pulp from green plant is used to apply on the skin	Common
7.	<i>Artocarpus heterophyllus</i> Lam. (Kathal)	Moraceae	Tree	Cultivated	Stem	Epilepsy	Knot of the tree trunk hung around the neck	Common
8.	<i>Asparagus racemosus</i> Willd. (Satmul)	Asparagaceae	Herb	Cultivated	Root	Vertigo	Root piece is tied to the ears	Common
9.	<i>Azadirachta indica</i> A. Juss. (Neeba)	Meliaceae	Tree	Roadside	Leaves	Boils	Green leaves are wrapped over the boils.	Common
10.	<i>Boerhavia diffusa</i> Linn. (Saanth)	Nyctaginaceae	Climbing herb	Wild	Leaves	Jaundice	Paste made from leaves is applied over the skin	Common
11.	<i>Bryophyllum pinnatum</i> (Lam.) Oken (Chotmaar)	Crassulaceae	Herb	Cultivated	Leaves	Boils	Warm green leaves tied over boils.	Common
12.	<i>Butea monosperma</i> (Lam.) Taub. (Dhaak)	Fabaceae	Tree	Cultivated	Root	Infertility	Root is tied on the arm of suffering women.	Common
13.	<i>Calotropis gigantea</i> (Linn.) Dry (Akauwa)	Apocynaceae	Shrub	Wild	Latex	i) Bleeding ii) Toothache	i) Milky latex is used externally over the wound to stop bleeding. ii) Latex applied to the gums to treat caries and toothache.	Common
14.	<i>Calotropis procera</i> (Ait.) Dry (Akauwa)	Apocynaceae	Under shrub	Roadside	Latex	Spine extraction	Fresh latex is applied externally over the spine inserted part.	Wild
15.	<i>Cannabis sativa</i> Linn. (Bhaang)	Cannabaceae	Herb	Wild	Leaves	Insect bite	Dried leaves are burned, fumes are externally applied over the insect bitten parts.	Common
16.	<i>Senna tora</i> Linn. (Chirota)	Fabaceae	Under shrub	Weed	Leaves	Joint pain/arthritis	Warm green leaves tied over painful joints.	Common
17.	<i>Cissampelos palata</i> Linn. (Batalu)	Menispermaceae	Climber	Open area	Stem	Pimples	Stem is tied on the arm of patient.	Common
18.	<i>Cuscuta reflexa</i> Roxb. (Amarbel)	Cuscutaceae	Wild	Climbing herb	Whole plant	Jaundice	Piece of the plant is tied around the neck.	Common
19.	<i>Cynodon dactylon</i> (Linn.) Pers. (Gha)	Poaceae	Herb	Open area	Leaves	Bleeding	Crushed leaves applied over the minor wounds to stop bleeding.	Wild
20.	<i>Datura stramonium</i> Linn. (Dhatura)	Solanaceae	Under shrub	Wild	Root	Detoxification	Root piece is tied on the foot over night.	Common
21.	<i>Ficus benghalensis</i> Linn. (Barh)	Moraceae	Tree	Roadside	Latex	i) Warts ii) Bleeding	i) Fresh latex applied over warts. ii) External application of latex over cut skin.	Common
22.	<i>Ficus racemosa</i> Linn. (Gulariya)	Moraceae	Tree	Cultivated	Root	Toothache	Root piece is tied with the painful side of teeth.	Common
23.	<i>Ficus religiosa</i> Linn. (Pipra)	Moraceae	Tree	Roadside	Latex	i) Ringworm ii) Dry skin	i) Fresh latex is applied over the skin of affected area. ii) Latex is used externally over the affected skin for nourishment.	Common
24.	<i>Ipomoea fistulosa</i> Marx & Chod. Austin (Besharam)	Convolvulaceae	Herb	Swamp margins	Leaves	Boils	Warm leaves wrapped over boils.	Common
25.	<i>Mimosa pudica</i> Linn. (Chuimui)	Fabaceae	Herb	Cultivated	Root	Whooping cough	Garland made from the part of root is hung around neck.	Common
26.	<i>Ocimum tenuifolium</i> Linn. (Tulsi)	Lamiaceae	Herb	Cultivated	Leaves	Heat stroke	Wet and fresh leaves are applied on forehead.	Common
27.	<i>Rauvolfia serpentina</i> Benth. ex Hook. (Sarpbooti)	Apocynaceae	Under shrub	Roadside within forest	Roots	Hypertension	Root piece is tied on the arm of the patients.	Wild
28.	<i>Ricinus communis</i> Linn. (Andauwa)	Euphorbiaceae	Shrub	Open area	Leaves	Joint pain	Warm and oiled leaf water on painful joints.	Common
29.	<i>Solanum nigrum</i> Linn. (Maku)	Solanaceae	Herb	Wild	Leaves	Insect bite	Leaves decoction is applied over insect bitten parts.	Common
30.	<i>Xanthium strumarium</i> Linn. (Kutiy)	Asteraceae	Under shrub	Weed	Leaves	Fungal infection	Crushed leaves are applied over infected parts.	Common

these herbal practices along with the tight verbal instructions of do's and don'ts' proved to be very effective against various diseases.

All these traditional practices are easy, safe, cost effective and with broad spectrum of applicability against many human diseases. It has been noticed, during the field trips, a distinct hierarchy in the percolation of traditional knowledge from old persons to new generation.

It's a need of hour to conserve and document this generations old ethical knowledge from extinction due to one or more reasons like that of untimely death of old medicine man or unavailability of wild plants (birva) due to over exploitation or uninterested young generation of tribals, or due to legislative constraints. For the said purpose, it has been concluded with the request of scientific exploration, experimentation and documentation of this traditional knowledge for the generations to come.

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