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Ethno-Medicinal uses of some plants of Suratgarh Tehsil, Sriganganagar (Rajasthan)

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Abstract

In this study, an ethno-botanical survey of the plant diversity was carried out in the different remote areas of Suratgarh tehsil *i.e.* Manaksar, Piperan, Rampura and Bhagwansar in Sriganganagar district, Rajasthan. The study was mainly emphasized on traditional uses of the 30 herbal plants of study area which are used for the treatment of various diseases and health problems. The informations were carried out about the uses of herbal plants for primary health care and the treatment of various health disorders through the personal contact and personal interview of rural old people of study area. This study was mainly focused on keeping the record of the herbal potential possessed by the cultivated plants in this area and their sustainability for the welfare of human race.

Keywords: Ethno- medicinal, Medicinal plants, Pharmaceutical

1. Introduction

Rajasthan is large state act as a good hot spot for the growth ethno- medicinal plants. This regions having variation in geology, physiographic, climatic, edaphic and basic conditions and shows the diversity of ethno- medicinal plants which grows in the wide range of habitat. Rajasthan includes 12.44% of tribal population of tribal population the major tribes of Rajasthan are: Kaibelia, Nats, Raika, Bhil, Garasia, Saharia. Meena, Damor, Kathodi, Patelia, Kanjar, Gardalia lauhar etc these tribes still depends upon local plants and their products as primary health care and as house hold remedies.

The flora of Suratgarh tehsil of Sriganganagar district (Rajasthan) is unique and diverse. The tradition - nal healer or v aids of this region have commendable knowledge of herbal plants around them. The climatic condition prevailing in this region provides an ideal habitat for natural growth of variety of herbal plants and other plants due to their ethno-medicinal importance. These plants provide raw material for the pharmaceutical, physiochemical, food flavoring and cosmetic industries.

From the time of Rigveda (45000-1600 B.C) or even at earlier time man has been using plants as a medicine. There are still so many plant species which are of medicinal importance to be discovered. Literature on traditional medicines is very little, especially from the ethno-medicinal point of view. The medicinal plants of Rajasthan have been studied for their ethno-medicinal accept by many workers such as:- Kapoor and Ranga (2005) have discussed about the protection and conservation of medicinal plants wealth of Rajasthan. Kapoor and Prajapat (2010) [7] studied the medicinal trees of Shekhawati region of Rajasthan used in folk and herbal medicines. Katewa and Sharma (2001) recorded ethno-medicinal observation from certain watershed areas of Rajasthan.

This paper documents the use of 30 plants which are belonging to different families for the treatment of various health problems. This knowledge provides good base for the development of new modern drug in the pharmaceutical industry and also beneficial for the identification and about traditional uses of local plants for fulfilling daily requirements.

2. Study Area

During the field survey which was conducted during 2013- 2014. Ethno-medicinal plants were collected from the remote areas such as Manaksar, Piperan, Rampura and Bhagwansar of Suratgarh tehsil of Sriganganagar district (Rajasthan). This district is the northernmost district of Rajasthan. This district is situated between 28°49– 30 °.6 North latitude and 72°36- 74°16 East longitudes.

The climate of this region is arid which is characterized by frequent drought. Rainfall occurs during the month of July to September. Winter rains are negligible. The vegetation of Sriganganagar district falls under the broad natural division of tropical forest. But due to extremely low rainfall and extremes of temperature, there is high evaporation and loss of moisture which converted this region in to a typical arid tract however, where moisture accumulates to some extent during rains. Scattered stunted trees not taller than six meter in height are found. This paper reveals the use of 30 plant species belonging to different families for the treatment of various health problems that are prevailing in the study area.

3. Material and Method

During the field survey, ethno-medicinal plants were collected from the remote areas of study region that are -

Manaksar, Piperan, Rampura and Bhagwansar of Suratgarh tehsil of Sriganganagar district (Rajasthan). The plants were collected in the fruiting and flowering stage.

Collected plant specimens were preserved in the form of herbarium specimen in the botany department of botany in Tagore P.G College Suratgarh tehsil of Sriganganagar district, Rajasthan. The knowledge about the medicinal uses of herbal plants was gained by the personnel contact among the old peoples of remote areas and through personal interviews of the local vaid and traditional healers.

4. Results and Discussion

Ethno- medicinal uses of different plants used by the rural people of study region for the treatment of various health problems which are shown in the table 1 as under:

Sr. No.	Botanical Name	Family	Local Name	Part/parts used	Folk uses
1.	<i>Acacia nilotica</i> (L.) Willd. Ex. Delile	Fabaceae/ Mimosaceae	Kikar	Flowers, Stem bark, Twigs.	Yellow flowers after grinding with water are applied in case of Eczema. 50gram powder is taken with water twice a day to cure hepatitis. 10 gram of bark powder with water is used in case of leucorrhoea. Bark powder is applied externally in case of ulcer. Young twig is used as toothbrush and helps in cleaning and strengthening the teeth.
2.	<i>Aegle marmelos</i> (L) corr.serr	Rutaceae	Belgiri, Bel patal	Fruit	Ripe fruit is used for curing chronic dysentery, habitual constipation and dyspepsia which are widely known to tribal communities.
3	<i>Aerva tomentosa</i> Forsk.	Amaranthaceae	Bui	Seeds	Wooly seeds stuffed in pillows relieve headache and protective against Rheumatism. Decoction of flowers and seeds applied externally against swelling.
3.	<i>Aloe vera</i> Mill.	Liliaceae	Gwarpatha	Leaves, Stem.	The juice of leaves is useful in case of diabetes and liver disorders. Juice of leaves and stem is applied to the pain- full inflammatory disorders of body.
4.	<i>Argemone mexicana</i> L.	Papaveraceae	Satyanashi	Latex, Root, Seed.	Seeds are poured in Mahua oil and are applied to eczema and incase of itching. Roots are brunt to provide heat in the treatment of piles. The smoke of burning seeds is useful in case of headache. Latex of this plant is used in case of rheumatism. Seed powder is used as antidote to snake. Powder of seed is also used in case of asthma headache and other stomach complaints.
5.	<i>Asparagus racemosus</i> . Willd.	Liliaceae	Sataver		Roots up on grinding if applied over bald area cures baldness. If root paste is applied on the sores, whole of the pus is dried out. Decoction of tuber with Neem is given twice a day to the patients of diabetes for one month to check sugar level. Paste of 5gram of fresh tuber is given orally with water twice a day for three to increase the lactation in nursing women.
6	<i>Calotropis gigantean</i> (L.) W. Aiton.	Asclepiadaceae	Safed aak	Flower, Leaves	Powdered flowers are used in case of digestive problems and used to treat Baadi (a type of gastric problem). Roasted leaves are applied in case of rheumatism.
6	<i>Calotropis procera</i> (Aiton.) R.Br.	Asclepiadaceae	Ankara		Flower ash is used to increase the vision and treatment of eye infection. Its flower is used in all stone medicines. Latex of this plant is used in case of tuberculosis. Latex is also used in case of fish poison.
8.	<i>Capparis decidua</i> (Forsk.) Edgew.	Capparaceae	Ker,Kair	Stem, Root	Stem grinded and its paste is applied to cure tumors. Stem paste is used in case of pyorrhoea and rheumatism. Paste of coal from wood is applied externally to muscular injuries. Powdered root bark is taken with hot water to cure asthma and cough.
9.	<i>Cassia fistula</i> Linn.	Caesalpiniaceae	Amaltas	Fruit(Pods), Stem	6 gram seed if boiled and taken cure stomachae and stomach tumors. Decoction of either 100 gram pods or stem bark is given to the animals as purgative. It is also used for the treatment of constipation and as an anthelmintic.
10	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Doob, Dub ghas	Inflorence, Fuits	Leaf juice is used in case of increased bleeding in ladies. This juice is administered by nose. Leaf juice can also be used to stop bleeding when there is fibrosis in the uterus. About 100 gram of juice of plant is taken daily to control the blood pressure. An infusion of roots is used for stopping bleeding in case of piles. Half cup extract or whole plant material is taken orally by tribal in dysuria.
11.	<i>Cyperus rotundus</i> Linn.	Cyperaceae	Nagar motha	Bulb, Root, Rhizome.	Dried bulb powder is useful in case of dysentery jaundice and urinary complaints. Root paste is useful in case of wounds and snake bite. Root paste is also useful in case of jaundice an bowel complaints. Juice of rhizome is given orally with water orally in case of irregular menstruation.
12.	<i>Dalbergia sissoo</i> Roxb.	Fabaceae	Shisham/Tahli	Leaves, Bark	Leaf juice is used in urine inflammation. Paste of about 250 gram of leaves twice in a day for 3days to cure diarrhea in case of animals. Decoction of leaves and dried powder of bark is used in bleeding piles

13	<i>Echinops echinatus</i> Roxb.	Asteraceae	Oont kantila	Root	Root extract is given with luke warm water in whooping cough. Fresh root is kept at the back of heat touching the scalped or kept in the naval before parturition times or during delivery pain for delivery.
14.	<i>Eucalyptus camaldulensis</i> Dehnm.	Myrtaceae	Safeda	Leaf	Oil extracted from the leaves can be gargled for sore throat.
15.	<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	Dudhli	Roots	Root powder is useful in case of diarrhea, bleeding and cramps in stomach. Latex applied cures nerve bleeding, nerve inactiveness. Paste of whole plant material when applied over sores and boils cure the affected area.
16	<i>Ficus benghalensis</i> Linn.	Moraceae	Bargad/ Bad	Roots, Stem bark, Latex.	Its aerial roots are used to increase memory. The tips of adventitious roots are crushed and boiled in the cow milk and the decoctions. Thus obtained is strained and selved hot in piles. The bark with pepper is used in snake bite. Latex is also used in case of rheumatism.
17	<i>Lawsonia inermis</i> Linn.	Lythraceae	Mehandi	Seeds,Leaves	Seed is used in case of piles Paste of leaves is applied over the skin to cure burns. The leaf juice along with sugar is administered in case of spermatorrhoea. Paste of leaves with alum apply on sore of thumbs and incase of pimples.
18	<i>Leptadenia pyrotechnica</i> (Forsk.)Decne.	Asclepiadaceae	Khimp	Stem, Leaves	The brushed stem and leaves are used to promote the healing of wounds. Decoction is prepared by adding stem pieces along with seeds of Ajawain (<i>Trachyspermum ammi</i>) and til oil is administered for expulsion of placenta. Stem is boiled and given orally to sheep to maintain the smooth movement of joints.
19.	<i>Nerium indicum</i> Mill.	Apocynaceae	Kaner	Roots	The roots are made into paste with water and are applied externally in case of ulcer and leprosy. A paste of roots is applied externally in case of piles. The paste of its leaves and root bark is used in case of skin diseases. Root is used for procuring the abortion obtained by both local application and internal administration.
20.	<i>Opuntia ficus indica</i> (L.) Mill.	Cactaceae	Nagphani	Fruit, Leaves	Fruit baked or made in to syrup are a good remedy in case of asthma and whooping cough. The leaves made into pulp are used as a poultice to apply in case of heat, inflammation and ulcers.
21	<i>Prosopis cineraria</i> (L.) Duce.	Mimosaceae	Khejari	Flowers, Inflorescence, Bark.	Flowers are pounded, mixed with sugars and eaten by women during pregnancy as safeguard against miscarriage. The grounded inflorescence mixed with sugar in water is used for prevention of boils and skin diseases. The dried bark and its paste is useful to cure pain of rheumatism.
22.	<i>Physalis minima</i> L.	Solanaceae	Chirmoti/Chiropattan	Fruits	Ripe fruits are given in dropsy, constipation and enlargement of spleen. Fruits are also used in colic complaints.
23.	<i>Ricinus communis</i> Linn.	Euphorbiaceae	Arand	Latex, Seed	Latex of this plant is used as laxative Seed oil (Castor oil) is used in case of Rheumatism and joint pain.
24.	<i>Salvadora persica</i> Linn.	Salvadoraceae	Peelu, Mithjal	Bark, Leaves, Root	Its bark ash (Bashma) is used as tooth powder Leaf juice is used as purgative. The leaves heated and tied up in the thin cotton cloth once applied in case of rheumatism. Juice of leaves is used in case of Scurvy. Paste of leaves in water is applied on the skin to treat irritation. Decoction of root is useful in case of fever.
25.	<i>Solanum nigrum</i> Linn.	Solanaceae	Makoi	Root, Fruit	Root with small amount of sugar is boiled in water and are given to women to enhancing fertility. Fruits are useful in fever, diarrhea and eye diseases.
26	<i>Tecomella undulata</i> (Sm.) Seem.	Bignoniaceae	Rohira	Bark, Stem, Root.	Paste of stem bark is used for 5-days as remedy for Syphilis. Decoction of stem pieces is mixed with sugar is given to ladies in leucorrhoea. Bark paste is applied to cure Eczema and eruption. The powder of root bark with sugar or honey and milk is taken by women to cure leucorrhoea. Root paste with mustard is applied on the blisters. The bark powder is used in case of diabetes.
27	<i>Tinospora cordifolia</i> (Willd.) Miers. ex. Hook F. & Thorns.	Menispermaceae	Giloy	Stem	Stem juice is valuable in high fever and given in jaundice either alone or mixed with honey. Juice of stem orally with honey in asthma. Paste of stem with five seeds <i>Piper nigrum</i> . is used to treat leucorrhoea
28.	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Gokhru/ Bhakadi	Fruit	The powdered in doses of 18 gram with sugar and black piper is useful in case of gleet, spermorrhoea and impotence.
29	<i>Withania somnifera</i> Dunal.	Solanaceae	Aswagandha	Root, Leaves	Root decoction is mixed with milk and given orally to cure sterility in men. Decoction of powdered root is given to ladies in Leucorrhoea and frequent miscarriage. Root paste mixed with cow urine is used skin diseases. Crushed leaves are useful for curing abscesses.
30.	<i>Ziziphus nummularia</i> Burm. F.	Rhamnaceae	Ber, Bordi.		Juice of root bark is applied in case of Rheumatism. The decoction of root is given in case of fever. Root paste is applied to old wound and ulcers. The powder of stem and bark is used in diarrhea. Ash of bark mixed in ghee is applied in cases of inflammation.

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6. Conclusion

The use and knowledge of herbal potential of plant based house hold remedies among the rural and scribal people of

different parts and district of Rajasthan reflects their revival interest in traditional medicine. The scientific documentation and validation of these remedies may help in discovering new drugs from the plant species. The information on the therapeutic uses of plants may provide a great potential for discovering new drug and promoting the awareness among the people to use them remedy in health easy system

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