Indian Journal of Traditional Knowledge
Vol. 12 (2), April 2013, pp. 334-338

Medicinal plants used by the rural people of Taluka Purandhar, district Pune, Maharashtra

M K Desale[1], P B Bhamare[2], P S Sawant[3], S R Patil[4] & S Y Kamble*[5]

[1&5]Bharati Vidyapeeth University, Pune-30, [2]Jai Hind College, Dhule, [3]Bharati Vidyapeeth University, College of Ayurved, Pune-43, [4]Bharati Vidyapeeth University, Yashwantrao Mohite College, Pune-38
E-mail: shyamrao.kamble@bharatividyapeeth.edu

Received 16.12.11, revised 29.02.12

An ethnobotanical survey of taluka Purandhar was undertaken during 2008-2010. During field visits *Bhagat*/*Mukhia* and other herbal healers were contacted, interviewed and information on 42 plants used as traditional medicine was collected. Further analysis showed that the *Vaidu* / *Bhagat* used six species for scabies; four species for diarrhoea; three species each for stomach ache, urinary trouble, teethache, kidney stone, constipation, two species each for skin disease, leucorrhoea, cough & colds, and one species each for arthritis, asthama, fever, etc. It is interesting to note that, for controlling skin diseases, the mode of preparation and administration of drug from plants like *Cassia tora*, *C. fistula, Martynia annua, Amorphophalus commutatus, Calotropis gigantea, Pongamia pinnata* were found to be varying from other reports. The practice of herbalists also showed that efficacy of *Ashwagandha* and *Shatavari* is increased by adding *Tinospora* and *Bryonia*. Main objective of the study is to collect scattered information on the medicinal plants used by the traditional herbalists in the rural and remote areas of Purandar taluka and analyze whether it is new or varying from earlier reports.

Keywords: Traditional herbal medicine, Rural people, Purandhar takuka

IPC Int. Cl.[8]: A61K 36/00, A01D 12/18, A01D 11/18, A01D 9/08, A01D 13/00, A01D 20.75, A01D 6/00, A01D20/46, A01D 6/22, A01D 7/30, A01D 7/00, A01D 5/17, A01D 20/00, A01D 13/37, A01D 7/48, A01D 6/31, A01D 11/07

Plants, since time immemorial, have been used globally as valuable and safe natural source of medicine. Ethnobotany deals with the study of total natural and traditional interrelationships between man and plants, and man's domesticated animals. The traditional knowledge of medicinal plants of a particular region for curing various ailments and the indigenous practices used by the local people are easy to administer, economical and can be offered to majority of people after establishing its efficacy for specific disease. Much of the information is available of plants used in Indian traditional medicine. There is mention of 67 plants in *Rigveda* (5000 yrs BC), 81 in *Yajurveda* and 290 in *Atharvaveda* (4500-2500 BC) for their medicinal usage. However, *Charak Samhita* and *Sushruta Samhita* have well documented medicinal properties and uses of 1100 and 1200 plant species, respectively. Indian Materia Medica has given an account of 3500 medicinal plants. In recent years, medicinal plant in general and traditionally used medicine sources in particular have attained much importance, in view of undesirable effects of allopathic medicines and environmental pollution. The World Health Organization (WHO 1978) has reported that 80% of the World's population relies on traditional forms of medicine, largely plant based, to meet the healthcare needs. In India it is estimated that out of ca 1600 species of flowering plants occurring in the country, at least 7500 species are used for medicinal purposes[1].

The publications on ethnobotany and related topics have revealed that moderate studies have been carried out on the inventorization and documentation of plants used as traditional medicines by the tribal and rural communities of Mahrashtra state[2-11]. Therefore, it has become very necessary to collect, collate and preserve the treasure of ethnomedicinal plant wealth on priority basis. In view of the above present study was undertaken to collect information on indigenous plant species used by the rural people of Purandhar taluka of Pune district; for curing various human ailments. The results of this survey can be useful to boost the economy of native Indians who are traditional practitioners. It can also be useful to provide affordable healthcare system to poor and people below poverty line.

*corresponding author

Material and methods

Pune district is adjacent to Koncan and Purandar fort in this taluka is situated at the height of 1387 m from MSL, on the spurs of Sahyadri ranges originated from Western Ghats in the Koncan and spreading eastwards[1] (Fig. 1). Purandar fort being part of Western ghats, fort and its surroundings are very rich in vegetation[1].

Present study is based on the ethnobotanical survey of Purandar taluka where the local people mostly use traditional herbal medicines, available in their vicinity, for curing various diseases. Initially in order to achieve the objective of collecting authentic and reliable information from the traditional practitioners, i.e. *vaidu*, *bhagat*, elderly persons and other stakeholders, by repeated meets and extensive dialogue, a good rapport with these key informants was established. The study area includes Purandar fort and 12 villages, viz. Petkarwadi, Panwadi, Undewadi, Chibhe, Vajragadh, Bandalwadi, Belhekarwadi, Ketkawade, Bahirwadi, Belsar, Kaldari, and Rajwada of Purandar taluka. From these villages more than fifty traditional healers/knowledge providers – 23 males and 27 females were short listed. Most of them belong to families, which still have connection with traditional agriculture and medicinal practices as the main source of livelihood. For collecting information a questionnaire was prepared and before interviewing Prior Information Consent was taken from knowledge providers. Indigenous knowledge of the traditional medicines was documented using Participatory Rural Appraisal technique, i.e. by involving key informants and local people in the interviews and discussions. Most of them provided information without any reservation or grudge. For survey and collection field visits were undertaken to area under study, covering all the seasons, for the period from 2008 - 2010. The data collected on medicinal plants include local name, parts used, method of preparation, approximate doses and mode of administration. At the time of collection of plant specimens, almost every time, atleast one medicine men accompanied us in the field tours and helped in locating and collection of desired plant material. Herbarium of voucher plant specimens have been prepared, identified and deposited in the herbarium of Yashwantrao Mohite College, Pune. Under the enumeration, these plants have been arranged alphabetically giving its botanical name, family, local/vernacular name, disease for which it is used and its mode of administration.

Fig. 1— Map of study area

Results and discussion

Data on medicinal plants collected from the area under study revealed that 42 species belonging to 39 genera and 32 families of flowering plants are used as traditional medicines by the local people (Table 1). These medicinal uses are noteworthy because they are either new reports of traditional use or the mode of administration of a drug is different from earlier reports. The analysis showed that the people there use – six species for scabies; four species for diarrhoea; three species each for stomachache, urinary troubles, teethache, kidney stone, constipation; two species each for skin disease, leucorrhoea, cough & colds, and one species each for arthritis, asthma, fever, etc. All 42 plant species used belong to angiosperms only, of which 36 are dicots and 6 are monocots. As for the habits of the species there are 16 herbs, 12 shrubs, 11 trees and 3 climbers. Plant parts of number of species used are stem 6, roots 7, leaf and fruit 7 each, seeds 4, flowers 2 and rhizome 1. For administration of a drug, juice of 15 species paste of 3, decoction of 6, powder of 13 and infusion and oil of 2 species each has been used. Generally 1-2 gm of powder with warm water and 1-2 spoonful of juice or decoction, once or twice or sometimes thrice a day was given. About 0.5 – 1.0 gm of paste or ointment was applied on wounds or aching part twice or thrice a day, as the case may be. Mainly all the herbalists use to give the treatment for a week or twice. It may be prolonged, till cure, as per the nature of ailment.

Table 1— Details of Medicinal plants and their uses

Sr. No.	Botanical name (Family) and Local name	Parts used and mode of administration of drug
1	*A.vera* (L.) Burm f. (Liliaceae) *Korphad*	Leaves are boiled with *Haladi* and 5 gm of it are taken once a day for curing cough.
2	*Amaranthus spinosus* L. (Amarantaceae) *Katemath*	Stem is burnt, ash is left behind 1-2 gm of powder with water is taken internally for 1-2 week for the treatment of kidney stone.
3	*Amorphophallus commutatus* (Schott) Engl. (Araceae) *Mogarikand*	Five gm of corm is crushed and swallowed to cure skin diseases and scabies.
4	*Argemone mexicana* L. (Papaveraceae)*Pivala Dhotra*	Latex with coconut oil is applied in the evening on skin to cure scabies.
5	*Argyreia sericea* (Convolvulaceae) *Garali vel*	Two to five gm of roots and leaves are used to increase lactation.
6	*Asparagus racemosus* Willd. (Asparagaceae) *Shatawari*	Five gm of tubers is crushed, juice is taken with sugar twice a day for the treatment of lactation problems and debility.
7	Azadirachta indica A.Juss. syn. Melia azadirachta L. (Meliaceae) Neem	Paste of whole plant & leaf is applied in the noon only on skin to treat skin diseases.
8	*Boerhaavia diffusa* L. syn. *B. repens* L. (Nyctaginaceae) *Dagad Phodi*	Whole plant decoction of 5 ml is taken once a day to cure anaemia, urinary troubles for one week or till cure.
9	*Butea monosperma* (Lam.) Taub. (Fabaceae) *Palas*	Bath with flower water (infusion) is taken every day for a week to cure scabies.
10	*Calotropis gigantea* (L.) Dryand (Asclepiadaceae) *Rui*	Two ml of latex is applied on affected part of skin in the morning for treatment of scabies.
11	*Capparis decidua* (Forssk.) Edgew. (*Capparaceae*) *Velitlaran*	Two to five gm of bark is crushed and taken once a day with water for the treatment of digestive disorder.
12	*Carica papaya* L. (Caricaceae) *Papaya*	One to two gm of Latex of raw fruit is applied on gums for the treatment of toothache.
13	*Cassia fistula* L. (Caesalpiniaceae) *Bahava*	One gm of gummy mesocarp of pod is given orally in the treatment of diarrhea and scabies.
14	*Celosia argentea* L. syn. *Celosia argentea* var. *cristata* (L.) Kuntze (Amaranthaceae) *Kombada*	Two to five gm of plant powder with milk is taken once a day in the treatment of white discharge and kidney stone.
15	*Cocculus hirsutus* (L.) W.Theob. (Menispermaceae) *Vasanvel*	Stem bangle is put on the wrist for the treatment of diarrhea.
16	*Coriandrum sativum* L. (Umbeliferae) *Dhane*	Five gm of seeds (fruit) are soaked in water and churned well and swallowed in the treatment of urinary troubles.
17	*Curcuma inodora* Blatt. (Zingiberaceae) *Vedi Halad*	One to two gm tuber paste is applied locally to get relief from muscle pain.
18	*Ensete superbum* (Roxb.) Cheesman (Musaceae) *Jangli Kel*	One fruit is swallowed everyday for 2-3 days to cure stomach ache.
19	*Ficus benghalensis* L. (Moraceae) *Wad*	Tender aerial roots are chewed for stomachache. Also used as tonic with sugar.
20	*Grewia tiliifolia* Vahl (Malvaceae) *Dhamani*	One to two gm of bark is chewed for the treatment of urinary trouble.
21	*Habenaria marginata* Colebr. (Orchidaceae) *Gupta*	One to two gm tuber paste is applied on genital organ externally to cure genital ailment.
22	*Haldina cordifolia (Roxb.) Ridsdale* (Rubiaceae) *Kelom*	Young branch is used as brush for the treatment of tooth ache.
23	*Hibiscus rosa-sinensis* L. (Malvaceae) *Jaswand*	To cure leucorrhoea flowers of white flowered variety, are fried in ghee, 2 gm are churned well and eaten once a day, for one to two weeks.
24	Justicia adhatoda L. syn. Adhatoda vasica Nees (Acanthaceae) *Adulsa*	i) Old leaves: Decoction 5 ml is taken in asthma twice a day. ii) Dry leaves filled in pipe and puffed in Asthma attack once a day.
25	*Lagerstroemia parviflora* Roxb. (Lythraceae) *Bondara*	Roots are crushed and 1-2 gm is swallowed once a day, till you get rid of kidney stone.
26	*Lantana camara* L. (Verbanaceae) *Ghaneri*	Leaf powder is taken twice a day to cure red discharges.
27	*Lavandula bipinnata* (Roth) Kuntze (Lamiaceae) *Gond*	One to two gm of stem is crushed and swallowed once a day in the treatment of diarrhea.
28	*Lawsonia inermis* L. (Lythraceae) *Mehandi*	Ten to fifteen gm paste of leaves is applied for the treatment of scabies, hair treatment.
29	*Martynia annua* L. (Pedaliaceae) *Waghnakhi*	One to two ml of ripe fruit oil is applied/rubbed on affected part of skin.
30	*Ocimum tenuiflorum* L.syn. *Ocimum sanctum* L. (Lamiaceae) *Tulas*	Juice of leaves with pepper is swallowed to cure fever, cough and colds.
31	*Phyllanthus emblica* L. syn. *Emblica officinalis* Gaertn. (Euphorbiaceae) *Avala*	Five gm of *triphala* is swallowed with warm water to avoid constipation. (with *Haritaki* and *Beheda*)

Contd.

Table 1— Details of Medicinal plants and their uses

Sr. No.	Botanical name (Family) and Local name	Parts used and mode of administration of drug
32	*Pongamia pinnata* (L.) Pierre (Fabaceae) *Karanj*	Two to five gm of seed oil is applied to cure scabies.
33	*Pueraria tuberosa* (Willd.) DC. (Fabaceae) *Ghorbel, Bhuikohala*	Two to five gm of tuber is eaten once a day in the treatment of stomachache.
34	*Senna tora* (L.) Roxb. syn. *Cassia tora* L. (Caesalpiniaceae) *Takla*	Seeds are roasted, pills prepared with triphala, 1 pill is taken twice a day to cure skin disease.
35	*Solanum virginianum* L. syn. *Solanum xanthocarpum* Schrad. & H. Wendl. (Solanaceae) Bhuiringani	Ripe fruits are burnt and fumes are taken for the treatment of toothache.
36	*Tephrosia villosa* (L.) Pers. (Fabaceae) *Unhali*	Whole plant decoction is taken once a day to cure skin disease.
37	*Terminalia arjuna* (Roxb. ex DC.) Wight & Arn. (Combretaceae) *Arjun*	Bark is crushed and strained. Five ml infusion is taken twice a day for the treatment of diarrhea and blood-pressure.
38	*Terminalia belerica* Roxb**.** (Combretaceae) *Beheda*	Five gm of *triphala* is swallowed with warm water, once a day to arrest diarrhea and digestive disorder.
39	*Terminalia chebula* Retz**.** (Combretaceae) *Haritaki*	Five gm of *triphala* is swallowed with warm water once a day in the treatment of digestive disorder. (with *Avala* and *Beheda*)
40	*Vitex negundo* L**.** (Verbanaceae) *Nirgudi*	A teaspoonful of powder of leaves is used in the preparation of rice and eaten twice a day for the treatment of arthritis.
41	*Withania somnifera* (L.) Dunal (Solanaceae) *Askand*	In the disorder of menstruation whole plant is powdered and 5-10 gm is taken twice a day with warm water.
42	*Zea mays* L. (Poaceae) *Maka*	Silky styles of female flowers of the maize are crushed, its decoction is taken once a day for a week to cure kidney stone.

The common ailments found within the villages of taluka Purandhar are urinary complaints, respiratory problem, gynaecological trouble, fever, cough & colds, hypertension, wounds, leucorrhoea, weakness, etc.

In each village 1-2 *Mukhia*/*Bhagat*/*Dadaji* and at some places middle aged woman were found to practice herbal medicines for the treatment of various aliments, thus helping in enhancing economic status of their families. It has become quite evident and widely accepted fact by scientific community that herbal medicines have no side effects and are affordable to the general public. Traditional herbalist participates in the various campaigns of plantations and cultivation of medicinal plants organized by government and other organizations. Thus they help in conservation of phytodiversity in general and medicinal plants in particular and also serve the purpose of Participatory Rural Appraisal technique. Medicinal plants which are in constant use and becoming rare from natural habitats, are preserved by cultivation individually and collectively. It is their self developed policy for conservation of medicinal plants. The information, on medicinal uses of plants, provided by the herbalist was cross-checked with other informants and its authenticity was ensured.

Conclusion

During interviews, discussions with traditional healers, stakeholders and *in-situ* observations in the field, it is revealed that they have close association with surrounding environment and people in the vicinity of the forest have good knowledge of usefulness of plant species especially of medicinal plants. The most popular medicinal preparations are decoction, infusion, paste or juice, powder, etc. The medicinal uses of some species may vary from village to village or earlier reports and have been included here. The flowers of *Hibiscus rosa-sinensis* (white flowered variety only) fried with ghee are most effective remedy for leueorrhoea whereas in the earlier reports there is no mention of white flowers. Use of fruit oil of *Martynia onnua*, gummy mesocarp of pods of *cassia fistula*, paste of tuber of *Amorpophallus commutatus*, yellow latex of *Argemone mexicana*, seed oil of *Pongamia pinnata* and taking bath with infusion in lukewarm water of flowers of *Butea monosperma* are noteworthy remedies in controlling skin diseases. The efficacy of *Ashwagandha* and *Shatavari* is increased by supplementing stem powder of *Tinospora* and whole plant of *Bryonia*.

Generally people in the rural and remote areas do not get in time and proper medical treatment and they mostly depend on traditional healers, who practice

herbal medicines for the treatment of various ailments. Thus both the people in the area and traditional practitioners are benefited by enhancing economic status of their families.

Acknowledgement

Authors are thankful to all the knowledge providers (*Mukhia*, Herbal Healers) who have provided valuable information on Traditional Medicinal Plants. Authors are grateful to Prof (Dr) Shivajirao Kadam, Vice-Chancellor, Bharati Vidyapeeth Deemed University, Principal Dr A B Patil, Bharati Vidyapeeth University, College of Ayurved and Principal K D Jadhav, Yashwantrao Mohite College, Pune for encouragement and facilities.

References

1 Puspangadan P, Ethnobotany in India: A Status Report, (Govt. of India, New Delhi), 1995

2 Jain S K, Ethnobotany in Modern India, Phytomorphology, 51 (2001) 39-54.

3 Jain S K, Glimpses of Indian Ehtnobotany, (Oxford and IBH Publication, Delhi), 1981.

4 Janardhanan K P, An enumeration of the medicinal plants of Khed Taluka (Maharashtra), Bull Bot Surv India, 5 (1963) 363-374.

5 Kamble SY & S G Pradhan, Ethnobotany of the Korkus in Maharashtra, Bull Bot. Surv India, 22(1-4) (1980) 202-203.

6 Malhotra MD & Yiwari VJ, Ethnobotanical study of the korku tribe of Amravati district, Maharashtra state, India, Pharmacognocy, 29(2) (1991) 1-4.

7 Sharma B D & Laxminarsimhan P, Ethnobotanical studies on the tribals of Nasik district (Maharashtra), J Econ Tax Bot, 8 (2) (1986) 439-454.

8 Tillu VY, Dongarkar N M, Padhye M D & Makade KH, A contribution to the ethnobotany of Dhule and Thane districts of Maharashtra state, (India) – a preliminary report, Bull Bot Surv India, 40 (1-4) (1998) 96-90.

9 Tribhuvan R & Peters P, Medico-ethno-biology of the katkaries and thakurs, Tribal Res Bull, 14 (1) (1992) 20-24

10 Upadhye A, VD Vartak & M S Kumbhojkar, Ethnomedico botanical studies of Dhule Forest in Maharashtra, India, Ethnobotany, 6(1-2) (1994) 25-33.

11 Yadav SS & PB Bhamare, Ethno-medico-botanical studies of Dhule forest in Maharashtra State (India), J Econ Taxon Bot, 13(2) (1989) 455-460.

12 H Santapau, The Flora of Purandhar, (Oxford Book and Stationary Company, New Delhi), 1958.