



TRADITIONAL ORAL CARE MEDICINAL PLANTS SURVEY OF DISTRICT CHHATARPUR IN MADHYA PRADESH.

Reenu Yadav^{1*}, Prachanti Ch²

¹NIMS University, Jaipur (Rajasthan), India

²Vaagdevi College of Pharmacy, Bollikunta, Warangal, India.

Article Received on
26 November 2013,
Revised on 21 December
2013,
Accepted on 19 January
2014

***Correspondence for**

Author:

Reenu Yadav

NIMS University, Jaipur
(Rajasthan), India.

ABSTRACT

In District Chhatarpur of Madhya Pradesh, many tribal and rural people of villages significantly rely on the local plant resources for their primary healthcare needs. For improving and promoting oral hygiene they use a large number of plants. According to the survey in different parts of Chhatarpur has been documented 40 species belonging to 26 genera and 22 families, being used for dental and oral healthcare. Many plants can be used as chewing sticks or in curing the problems like toothache, bleeding, foetid smell of mouth etc.

Key words: Dental and oral care plants, Chhatarpur, India.

INTRODUCTION

From ancient civilization plants have been used to improve dental health and to promote oral hygiene.¹ In African and South Asian countries as well as in tropical America and Southern United States the practice of tooth cleaning by chewing sticks of some selected plants was common. In Babylonians in 5000BC such type of brushing teeth by different plant parts was also practiced².

India is repository of herbal medicines and there are evidences that herbs have been used in the treatment of various diseases for revitalizing body system in almost all ancient civilization. Considering the fact that traditional knowledge forms the basis forms the fact that traditional knowledge forms the basis for development of new product and rural diversity is more endangered than biodiversity. There is an urgent necessity to record as quickly as possible all information about plants and the role of tribes in conserving them.³

Mostly the people living in urban areas use toothpaste, massage gels and mouth rinse which contains synthetic substance such as antimicrobial active benzydamine hydrochloride, cetyl pyridinium etc, on the other hand, plant parts are being used as toothbrush, oral gargle and mouthwashes by rural and tribal people for their oral hygiene because of their availability, low cost and simplicity⁴. Due to the combined effect of mechanical cleaning and enhancement of salivation of chewing sticks, it can be used as effective toothbrushes in maintaining oral hygiene. In a world India is one the major countries and has 17000 flowering plants. So recently considerable attention has been paid to utilize eco-friendly and bio-friendly plant based products for the prevention and cure of different human disease⁵.

Madhya Pradesh is veritable niche of growing healing herbs, which are being used in Indian system of medicine like Ayurveda, Siddha and Unani. The plants of immense medicinal value are abundantly found in Chhatarpur District. Madhya Pradesh has got 1, 35, 164 sq km of forest which accounts for 30.48% of total geographical area of the state. Medicinal and aromatic plants are important products found in forest areas throughout Madhya Pradesh from the plains to the hills. More than 80 percent of the people in Madhya Pradesh (India) rely on herbal remedies as a principal means of preventing and curing illnesses and following traditional system of medicine.⁶

Study area

The present investigation has been carried out in all over area of chhatarpur district MP during 2010. Chhatarpur district is a part of central India and lies in Satpura hill range adjoining Vindhyan scarp bordering Uttar Pradesh, between 20° 26'N to 25° 20'N latitude and 78° 05' to 25° 20'E longitude. Knowledge about the herbs and formulation used in the treatment of various ailments was obtained from tribal and rural people.

METHODOLOGY

For the survey, standard method used and advised by Jain (1991) was followed.⁷ Information was collected from different tribal people as well as villagers. Information about the formulations used by the tribals and rural people were collected by the investigators from different study sites of chhatarpur district in MP. Work was made after carefully planning field trips. During the field trips interview were conducted by the author with the informants viz. The tribal groups (Gond, Kondar, Nat, Barias) and healers (Vaidyas). For compilation of information of the plants used for oral care in Chhatarpur a literature survey was also carried out.⁸⁻¹⁰

Table 1: - The list of recorded plants

BOTANICAL NAME	FAMILY	PARTS USED	USES
<i>Acacia nilotica</i> (L) Willd. ex	Mimosaceae	Young Stem	Chewing stick, toothache, foetid Smell
<i>Aegle mannelos</i> Correa ex Roxb.	Rutaceae	Leaves	Toothache, foetid Smell
<i>Ambroma augusta</i> (L) Lf.	Sterculiaceae	Root	Toothache
<i>Annona squamosa</i> L.	Annonaceae	Young Stem, Leaves	Chewing stick, toothache
<i>Amomum suhulatum</i> Roxb.	Zingiberaceae	Fruit	Fetid smell, toothache
<i>Azadirachta indica</i> A. Juss.	Meliaceae	Young Stem, Leaves	Toothache
<i>Beautea Monosperma</i> Lam.	Fabaceae	Young Twigs and barks	Chewing stick, pyorrhea
<i>Bridelia sikkimensis</i> Gehmn.	Euphorbiaceae	Young Stem	Chewing stick
<i>Bridelia tomentosa</i> BJ.	Euphorbiaceae	Young Stem	Chewing stick
<i>Briedelia retusa</i> (L) A. Juss.	Euphorbiaceae	Young Stem	Chewing stick
<i>Calotropis gigantea</i> (L.) R.Br. ex Aitoo	Asciopi adaceae	Root	Toothache
<i>Cinnamomum bejolghota</i>	Lauraceae	Leaves	Fetid smell of mouth
<i>Clerodendrum viscosum</i> Vent.	Verbenaceae	Young Stem	Chewing stick
<i>Cordia obliqua</i> Wild	Boraginaceae	Seeds and leaves	Paste , powder, Dental disorders
<i>Croton caJldatus</i> Geisel.	Euphorbiaceae	Young Stem	Chewing stick
<i>Cyperus rotundus</i> L.	Cyperaceae	Bulb	Mouth wash, gum disease
<i>Dalbergia sissoo</i> DC.	Fabaceae	Young Stem	Chewing stick
<i>Eucalyptus globules</i> Labill.	Myrtaceae	Leaves	Mouthwash, fetid smell of mouth
<i>Ficus benghalensis</i> Linn.	Moraceae	Bark , Leaf, Flower, Root	Toothbrush, Dental disorders
<i>Glycosmis pemaphylla</i>	Rutaceae	Young Stem	Mouthwash, fetid smell of mouth
<i>Jatropha gos.sypifolia</i> L.	Euphorbiaceae	Young Stem	Chewing stick
<i>Madhuca indica</i>	Sapotaceae	Bark	Dental disorders
<i>Melastoma malabathricum</i> L.	Melastomataceae	Young Stem, fruit	Chewing stick, gum trouble
<i>Melia azedarach</i> L.	Meliaceae	Young Stem	Chewing stick
<i>Mimosa pudica</i> L.	Mimosaceae	Root	Toothache
<i>Nicotiana tabacum</i> L.	Solanaceae	Leaves	Toothache
<i>Phoenix sylvestris</i> (L.) Roxb.	Araceae	Root, young rachis	Toothache, chewing stick
<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Young stem, fruit	Chewing stick, fetid smell of mouth
<i>Phyllanthus reticulatus</i> Poir.	Eu phorbiaceae	Tender twig	Chewing stick,
<i>Piper attenuatum</i> Miq.	Piperaceae	Leaves	Toothache, gum trouble
<i>Piper betle</i> L.	Piperaceae	Leaves	Fetid smell of mouth
<i>Piper nigrum</i> L.	Piperaceae	Fruits	Toothache
<i>Psidium guajava</i> L.	Myrtaceae	Young stem,	Chewing stick, mouthwash,

		leaves, fruit	bleeding Gum
<i>Punica granatum</i> L.	Punicaceae	Leaves	Gum trouble
<i>Rumex napalensis</i> Spreng.	Polygonaceae	Leaves	Gargle in teeth bleeding
<i>Syzygium aromaticum</i>	Myrtaceae	Floral bud	Toothache, fetid smell, gum trouble
<i>Smuax zeylanica</i> L.	Smilacaceae	Twig Capitulum	Gargle in toothache Toothache
<i>Stebulus asper</i> Lour.	Moraceae	Leaves	Dental diseases
<i>Terminalia arjuna</i> Wt. & Am.	Combretaceae	Young bark, stem	Chewing stick
<i>Terminalia bellirica</i> (Gaertn.) Roxb	Combretaceae	Bark, Fruit	Toothache
<i>Terminalia chebula</i>	Combretaceae	Fruits,	Toothache
<i>Toddalia asiatica</i> (L.) Lam.	Rutaceae	Young stem	Chewing stick
<i>Trewia nudiflora</i> L.	Eu phorbiaceae	Young stem	Chewing stick
<i>Vitex negundo</i> L.	Verbenaceae	Leaves	Toothache

RESULTS AND DISCUSSION

India has an ancient heritage of traditional medicine. The materia medica of India provides a great deal of information on the folklore practices and traditional aspects of therapeutically important natural products. Indian traditional medicines based on various systems including Ayurveda, Siddha, Unani and Homeopathy. The evaluation of these plants drugs is primarily based on phytochemical, pharmacological and allied approaches including various instrumental techniques. With the emerging worldwide interest in adopting and studying traditional system and exploiting their potential based on different health care systems, the evaluation of the rich heritage of traditional medicine is essential.¹¹ In this regard, on such study was performed to explore the medicinal plants utilized for dental care by the local peoples of Chhatarpur district.

Plants belonging to 22 families were recorded to be used in dental and oral healthcare according to the present survey. The list of recorded plants (Table 1) is dominated by the members of Euphorbiaceae.. The tribal and rural people in this area uses these natural remedy with good efficacy for treating different oral health problems like toothache, sores, bleeding from teeth, foetid smell of mouth etc. In most of the cases young stem of about 15 - 20 cm x 1.5 cm is cut, chewed to make it like brush and used to clean the teeth. The best and widely used examples are *Neem*, *Verenda*, *Bahul* or *Bahia*, *Peyara*, *Arjun*, *Ghentu* etc. In other cases leaves (*Psidium guajava*, *Punica granatum*, *Piper* spp. *Strehlus asper*, etc.), fruits (*Psidium guajava*, *Terminalia chehula*, *T. hellirica* etc.) or roots (*Calotropis gigantea*, *Phoenix sylvestris*) are chewed and kept in mouth for some time to cure sore, bleeding or mouth odour. The plants are collected from nearby forests, scrubs, grasslands, cultivated fields, river

bank, homestead gardens or markets. In many semi-urban and urban markets chewing sticks of *Neem* is sold in good quantity.

Further analysis of the list of recorded plants shows that many of them are well known and established Medicinal Plants with good market demand and some of them are often in cultivation / plantation. These include *Amomum suhulatum*, *Azadirachta indica*, *Calotropis gigantea*, *Cyperus rotundus*, *Syzygium aromaticum*, *Jatropha curcas*, *Phyllanthus emhelicus*, *Piper betle*, *Piper nigrum*, *Punica granatum*, *Smilax zeylanica*, *Terminalia arjuna*, *Terminalia bellirica*, *Terminalia chebula*, *Eucalyptus glohulus*, *Vitex negundo*, etc. People use mostly the local resources because the method of treatment is local, but the recorded list of plants also includes few exotics like *Eucalyptus globulus*, *Nicotiana tabacum*, *Syzygium aromaticum*, etc.

According to the opinion of the users, most of these plants are quite effective in oral health care but scientific verification is very much essential.

INFERENCE

Tribal and rural people of the study area, regarding their tooth care and oral hygiene are quite rich in knowledge. Proper documentation of such valuable indigenous knowledge is an urgent need. Some of these plants may be exploited in future for safer and effective dental care and oral hygiene if detailed pharmacological, chemical and clinical investigation is done properly.

ACKNOWLEDGEMENTS

Authors are grateful to the rural and tribal people of the study area for providing important and valuable information and their cooperation during field survey.

REFERENCES

1. Ganesan, S. 2008. Traditional oral care medicinal plants survey of Tamil Nadu. *Natural Product Radiance*. 7(2):166-172.
2. Almas, K. and Zeid, Z. 2004. The immediate antimicrobial effect of toothbrush and miswak on cariogenic bacteria: a clinical study. 1. *contemp. Dent. Pract.* 5: 105 -114.
3. Rao R., 1996. Traditional knowledge and sustainable development: key role of ethnologist, *J. Ethnobotany*, 8, 14 – 24
4. Das, A.P. 1995. Diversity of Angiospennic flora of Darjeeling Hills. In: Pandey, A.K. (ed.). *Taxonorny and Biodiversity*. CBS Publishers and Distributors, New Delhi. 118 -127.

5. Das, A.P., Samanta, A.K. & Biswas, K. 2010. A census of *Piper* L. (Piperaceae) in Terai, Duars and Hills of Darjeeling and Sikkim Himalayas. *Pleione* 4(1):33-41.
6. Arjariya A., Chaurasiya K., 2009, Some medicinal plants among the tribes of Chhatarpur District (M.P.) India. *Ecoprint* 16: 43-50.
7. Jain, S.K. 1991. *Dictionary of Indian Folk Medicine and Ethnobotany*. Deep Publications, New Delhi.
8. The useful plants of India by SP Ambasta, K. Kashyap and R. Chand, National Institute of Science Communication, CSIR, New Delhi, Reprint 2000.
9. Nandkarni AK, Nandkarni's Indian materia medica, popular prakashan Pvt ltd., Mumbai, reprint 2002.
10. Joshi SG, Medicinal plants, Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi 2006.
Pateriya Videsh, Tiwari Brajesh, Agrawal Pooja, 2013, Ethnomedicinal Uses of 'Bargad' *Ficus benghalensis* Linn. and their Investigation in Chhatarpur District *Advanced Research in Engineering Sciences*. 1(2), 2347- 4130.