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Ethnobotanical and ethnomedicinal Survey of Kadegaon Tahsil, Sangli (Maharashtra) India

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Abstract

The present investigation deals with the ethnomedicinal plants of Kadegaon Tahsil of Sangli district, Maharashtra. Traditional medicine and ethnobotanical information play an important role in scientific research, particularly when the literature and field work data have been properly evaluated. There is no documentation of this ethnomedicinal knowledge. It is thus important to document and understand the medical heritage of a changing culture before it is lost entirely to future generations. The study was carried out in the villages of Kadegaon Tahsil concerns for the medicinal plants used for the treatment of various diseases by local inhabited. 21 plant species belonging 15 families are used for treating various diseases. The information on correct botanical identities, family, local, name, plant parts used & uses of each plant. This study presents the results of a field survey of the plants used medically by the rural people of Kadegaon Tahsil in Sangli districts.

Keywords: Ethnobotany, medicinal plants, remedies, Kadegaon Tahsil, Sangli.

1. Introduction

The Kadegaon is a Tahsil place of Sangli district in Maharashtra. It is located at 17.15 N latitude & 74.15. E longitude. It occupies an area with 55 Villages. The hilly submountain ranges of Western Ghats contain valuable ethnomedicinal plants in villages. Ethnomedicinal plants of the region have been used for the treatment of various diseases. Medicinal plants flourishing in the valley have been in contact use by local inhabitants for caring the ailments of human beings. Ethnomedicinal plants are the local heritage with global importance. The ancient civilization including China, Egypt and Indus Valley the utilization of medicinal plants by them (Kirtikar and Basu 1935) [7]. In recent years, there has been a tremendous range of interest in the medicinal plants especially those used in Ayurvedas and other traditional systems of medicines. Drugs obtained from plant are believed to be much safer and exhibit a remarkable efficacy in the treatment of various ailments (Siddique *et al.*, 1995). The folk medicinal traditions play a reflecting and prominent role in human and environment interaction (Chopra *et al.*, 1956) [3]. The value of medicinal plants to the mankind is very well proven. It is estimated that 70 to 80% of the people worldwide rely chiefly on traditional health care system and largely on herbal medicines (Farnsworth *et al.*, 1985; Farnsworth and Soejarto 1991; Pei Shengji 2002; Shanley and Luz 2003 [4, 5, 9, 11]).

Herbal drugs obtained from plants are believed to be much safer; this has been proved in the treatment of various ailments (Mitalaya *et al.*, 2003) [8]. Traditional medicine and ethnobotanical information play an important role in scientific research, particularly when the literature and field work data have been properly evaluated (Awadh *et al.*, 2004) [1]. Medicinal plants have always been the principle form of medicine in India. The practices of traditional medicine are based on hundreds of years of belief & observations.

2. Material and Methods

2.1 Study area: Kadegaon Tahsil is situated in Sangli district in Maharashtra. It has an average elevation of 271 meters (889 feet). The length of the Kadegaon Tahsil is 30 km² while its breadth is 20 km² approx. The Kadegaon Tahsil has a moderate climate with hot summer, a cold winter & a short monsoon season. During summer the maximum temperature is around 41 °C & minimum is around 25 °C & in winter maximum temperature is 23 °C minimum 12 °C. The black & red soil, bright sunlight are the two important natural resources abundantly available in this region which are responsible for the development of the vegetation having variable medicinal properties.

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During the present work we have gone in the various villages. The survey work among the Kadegaon Tahsil were conducted in the villages during July 2009 to January 2011. During the survey, first hand information on the medicinal uses of the plants was gathered from local people & vaidayas.

2.2. Collection of Information:

The information on ethnomedicinal uses of plants was obtained through direct field interviews with knowledgeable people of the villages & traditional healers. The data regarding names of plant parts used & their method of preparation & made of administration of various remedies were also noted down. The medicinal value of each plant was enumerated in the following pattern: a) Botanical name, b) Family, c) Vernacular name in Marathi d) Parts used & e) ethnomedicinal uses

2.3. Identification

The plant materials were identified with the help of standard local floras (Flora of Bombay Presidency), Preliminary identification was done by examining fresh plants products from the field with the help of villagers. Few respondents were more informative & co-operative. They have shown fresh plants in the habitat, which was useful for the final identification. The identification of plant materials was confirmed with the help of published data.

3. Results

Enumeration of Ethnomedicinal data:

3.1. Botanical name: *Abrus precatorius* Linn

Family: Papilionaceae

Vernacular name: Gunj

Distribution: Rare in Sagareshwar Sanctuary

Part used: Fresh leaves, seeds

Ethnomedicinal uses:

1. Fresh leaves eaten raw to cure thorat infection.
2. Seed paste is applied on swellings to heal.

3.2. Botanical name: *Achyranthes aspera* Linn

Family: Amaranthaceae

Vernacular name: Agadha

Distribution: Common on waste land

Part used: Entire plant

Ethnomedicinal uses:

1. Paste of roots with warm water given to women to stop bleeding after abortion.
2. 4 gms. of root powder with a cup of milk twice daily for 15 days to cure piles.

3.3. Botanical name: *Adhatoda zeylanica* nees.

Family: Acanthaceae

Vernacular name: Adulsa

Distribution: Common in garden

Part used: Leaves

Ethnomedicinal uses:

1. Half to one cup decoction of leaves of adulsa with stem pieces of gulvel is given twice a day for 1-2 days in fever
2. An extract of the fresh leaves is given to relieve the symptoms of cough and cold.
3. Leaves are boiled with water and extract is taken thrice in a day in fever.

3.4. Botanical name: *Aegle marmelos* (L)

Family: Rutaceae

English name: Bel tree

Vernacular name: Bel

Distribution: Sonsal

Part used: Fruits

Ethnomedicinal uses:

1. Raw fruit is burnt on fire and then pulp is powdered. Two teaspoonful powder is given thrice a day in blood dysentery.
2. Four spoonful of fruit juice is administered daily thrice for 3 days to cure diarrhea.

3.5. Botanical name: *Aloe barbadensis* (L) Burm

Family: Liliaceae

English name: Indian Aloe

Vernacular name: Korphad, kumara

Distribution: Common in all villages

Part used: Thick fleshy leaves

Ethnomedicinal uses:

1. 50 gms of mucilaginous juice obtained from leaf- pulp mixed with a little amount of sugar are given twice daily for a week on leucorrhoea.
2. The juice or paste of the leaf, when added to Germinated *Trigonella foenum-graceum* seeds, is helpful in preventing hair loss.
3. The leaf itself is used for skin diseases and as cosmetic to remove wrinkles and remedy burns.
4. The juice of the roasted leaf is given for cold, cough and fever.

3.6. Botanical name: *Azadirachta indica* A. Juss

Family: Meliaceae

English Name: Margosa tree

Vernacular name: Neem,

Distribution: Common in all villages

Part used: Leaves, Bark, Seed & Root

Ethnomedicinal uses:

1. Poultice of leaves & bark is applied externally on boils as an antiseptic. Young leaves are eaten for various skin diseases.
2. Aqueous extract of leaves is given thrice a day for three days to cure dysentery.

3.7. Botanical name: *Butea monosperma* (lam) kuntze

Family: Fabaceae

English name: Flame of the forest

Vernacular name: Palas

Distribution: Rare on hills

Part used: Flowers & fruits

Ethnomedicinal uses:

1. Two spoonful of bark juice is given orally on empty stomach to relieve from intestinal worm infestation

3.8. Botanical name: *Calotropis procera* (wild) R. Br.

Family: Asclepiadaceae

English name: small crown flower

Vernacular name: Rui

Distribution: common in all villages

Part used: Entire plant & latex

Ethnomedicinal uses:

1. A paste made from the entire plant of this species is mixed with sugar and applied over dog bites.
2. The latex is useful in the treatment of ringworms and skin disease.
3. Leaf is coated with coconut oil and warmed on hot iron (Tawa) and tied as bandage on joints to cure pain.

3.9. Botanical name: *Caesalpinia bonducella* (L.) Roxb.

Family: Caesalpinaceae

Local name: Sagargota

Distribution: Common on waste places

Habit: Shrub

Plant parts used: Leaves, Seed

Ethnomedicinal uses:

1. Crushed ten leaves and made into a paste and given to the patient once daily for 7 days to cure blood sugar level.
2. Oil is extracted from the seeds and smear the oil to cure boils and wounds.

3.10. Botanical name: *Datura metel* Linn.

Family: Solanaceae

Vernacular name: Dhotra

Distribution: common in agricultural field

Part used: Leaves, fruits

Ethnomedicinal uses:

1. Leaves and fruits ground into paste and massaged gently on painful parts it cure muscular pains.

3.11. Botanical name: *Emblia officinalis* Gaertn

Family: Euphorbiaceae

English name: Emblica myrobalan

Vernacular name: Avala, Dongari Avala

Distribution: Common in garden

Part used: Fresh & dried fruits

Ethnomedicinal use:

1. Tea spoonful powder of seeds is taken once or twice a day for a week by diabetic person.
2. Fruit juice is acrid, cooling, refrigerant & diuretic.
3. Fruit juice is good for blood purifier.

3.12. Botanical name: *Euphorbia hirta* Linn.

Family: Euphorbiaceae

Local name: Dudhi

Distribution: Common on waste places

Part used: Entire plant

Ethnomedicinal uses:

1. Latex of the entire plant applied externally till cure of burns and lip cracks.

3.13. Botanical name: *Hemidesmus indicus* (L) R. Br.

Family: Asclepiadaceae

Vernacular name: Anantmul

Distribution: Rare in Sagarshwar Sanctuary

Part used: Entire plant

Ethnomedicinal uses:-

1. The decoction of root is taken in empty stomach in sexual debility and also in general weakness for about two months.
2. Roots are also used as a tonic and a diuretic, and for the treatment of hypertension.

3.14. Botanical name: *Lantana camara* Linn

Family: Verbenaceae

Vernacular name: Ghaneri

Distribution: Common in wild places

Part used: Whole plant.

Ethnomedicinal uses:

1. Powder of dried flowers is taken with tea twice a day to cure jaundice.
2. Leaf decoction given in 2-3 spoonfuls twice a day for 4 days to cure Malaria.

3.15. Botanical name: *Murraya koenigii* L. Sprengel

Family: Rutaceae

Local name: Kadipatta

Distribution: Grown near houses/ wild

Plant parts used: Leaves

Ethnomedicinal uses:

1. Two spoonful of leaf juice is administered daily twice for 3 days to cure diarrhoea.
2. Juice of tender leaves is taken orally to arrest vomiting.

3.16. Botanical name: *Syzygium cumini* (L) Skeels.

Family: Myrtaceae

Vernacular name: Jamun

Distribution: Common in all villages

Part used: fruits, leaves

Ethnomedicinal uses:

1. Leaf extract & ripened fruit are used as strong appetizer. Fruit is also eaten to make the semen viscous, vigorous & powerful. The fruit is also eaten to cure goiter.

3.17. Botanical name: *Tamarindus indica* Linn

Family: Caesalpinaceae

Vernacular name: Imli / Chinch

Distribution: Common in all villages

Part used: Leaves, Bark & fruits

Ethnomedicinal uses:

1. The dry fruits powdered is taken in twice a day for 2-3 days to relieve gastric pain.
2. A paste made from the leaves of this tree is taken twice a day is useful in the treatment of inflammation.

3.18. Botanical name: *Tinospora cordifolia* (wild) Hook

Family: Menispermaceae

English name: Tinospora

Vernacular name: Gulvel

Distribution: Common on hedges

Part used: Leaves, Fresh & dried stem with bark

Ethnomedicinal uses:

1. Leaf & stem are made into paste & administered 15 teaspoon a day for 15 days to cure reduced lactation.
2. One piece of 1-2 inches long stem & 2-3 leaves are pounded in water & kept overnight. One cupful of that water is taken in the morning for 5-6 days against jaundice.
3. Decoction of pieces of stem along with leaves of Adhatoda is given twice a day for 1-2 days in fever.

3.19. Botanical name: *Tridax procumbens* Linn.

Family: Compositae

Vernacular name: Dagdi pala

Distribution: Common wild plant

Part used: Leaves

Ethnomedicinal uses:

1. Leaf juice applied externally for cuts, sores, ulcers & wounds to arrest the bleeding.

3.20. Botanical name: *Ocimum sanctum* Linn.

Family: Labiatae

Vernacular name: Tulsi

Distribution: Grown near houses/ wild

Plant parts used: Leaves

Ethnomedicinal uses:

1. Leaf juice mixed with juice of *Zingiber officinale* and honey and administered in 2 spoonful twice a day for 3-4 days to cure cough and cold.

3.21. Botanical name: *Vitex negundo* Linn.

Family: Verbenaceae

Vernacular name: Nirgudi

Distribution: All villages

Part used: Leaves & Branches

Ethnomedicinal uses:

1. The warm leaf paste is applied over sprain.
2. Dried leaves are used to protect stored grains & smoke of leaves repels mosquitoes.
3. Leaves boiled in water & leaves used for bathing & said to be effective.

4. Discussion

In the present investigation 21 medicinal plants are used for the treatment of various diseases like thorat infection, stop bleeding, cure piles, fever, cough and cold, blood dysentery, diarrhea, leucorrhoea, preventing hair loss, remove wrinkles and burns, skin diseases, relieve from intestinal worm infestation, cure muscular pains, diabetes, blood purifier, general weakness, hypertension, jaundice, Malaria, vomiting, strong appetizer, goiter, inflammation also. 21 plants species belonging to 15 families are reported. The utility lies through their roots, stem, bark, latex, leaves, fruits & seeds. These are taken internally or applied externally in the form of infusion, decoction, paste or powder. Most of the plants used in medicines are single or either mixed with other ingredients. Medicinal plants studied are enumerated arranged alphabetically with their botanical name followed by families, local name, parts used & ethnomedicinal uses. Some important medicinal plants needs immediate conservation & their cultivation should be encouraged through which their extinction can be prevented & local village people may also get low-cost their disease.

5. Conclusion

This study shows that knowledge and usage of herbal medicine for the treatment of various ailments among peoples is still a major part of their life and culture. The results of the present study provide evidence that medicinal plants continue to play an important role in the healthcare system of people in Kadegaon Tahsil in Sangli district.

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