

Traditional Use of Herbal Medicines against Rheumatism by the Tribals of Satna District (M.P.)

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Abstract: *The present paper is the outcome of an attempt made to document the traditional knowledge on medicinal plants which are used by tribals and other rural people of Satna district in in Madhya Pradesh for treatment of rheumatism. The plants which are used for the treatment of various diseases belongs to 35 species of 22 families. In the present piece of work an alphabetical list of these plants with their family, local name, preparation of medicine and dosage and mode of administration has been discussed at length.*

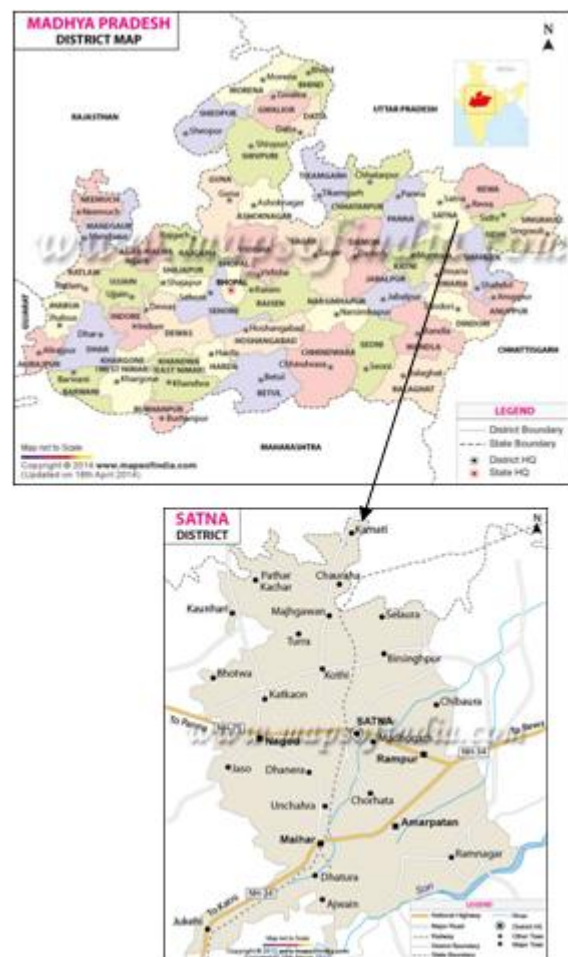
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1. Introduction

Medicinal plants are the gift to mankind because they cure diseases without any side effects. Herbs have been playing a major role in curing various ailments and diseases from antiquity. Herbal medicines used widely by the tribals and rural people, as they are available in the vicinity of their homes. Herbs contain a large number of naturally occurring substances that work to alter the body's chemistry in order to return it to its natural state of health. In recent years, due to fast and busy life style, mental tension, low physical activity, many diseases and disorders are increasing (Sahu, 2010). One of the most common musculoskeletal disease and disorder is rheumatism, which is more frequent in women at the age of forty and above. The cause of rheumatism is due to deposition of uric acid in cartilage of joints. Recurrent attacks, pains and swelling of joints, with crippling effects in some cases, have also been observed in various joint diseases. Herbs have been used for centuries in the treatment of many diseases and it has been demonstrated that some of them can have an incredible effect as an herbal treatment for rheumatism. In modern allopathic system many medicines are also prescribed for this disorder, but they have many side effects. Therefore to avoid their side effects, now days, people are much inclined to use herbs based medicines rather than modern allopathic (Samvatsar and Diwanji 1999). Keeping this in view, present paper highlights the ethnomedicinal plants which are used traditionally for treatment of rheumatism in Satna district. These herbs have properties that can significantly reduce joint pain or swelling and have no side effects.

Satna is located between 81°15' east longitude and 24°42' north latitude and is situated on the Vindhyan plateau at the height of 318 m above msl. There are many river, viz., Satna, Tamas, Beehar, Asrawal and Simrawal, and most of the land has been irrigated by these rivers. The land becomes fertile due this irrigation facilities. There are a hills of Kaimore and Panna. In Satna district many minerals are found, due to this many industries are running. There are two big cement factory Satna and Maihar. The main tribes of Satna district are Kol, Gond, Mawasi, Panika and Khairwar. Mostly they are dependent on forest products. Besides the tribes, other rural people and forest dwellers frequently use many common local plants for treatment of various ailments and disorders. Livelihood of these communities living in

remote areas in deep forest provides a good scope for the study of this region for ethnomedicinal use of plants. Though there are earlier records on traditional uses of plants by the tribals and other rural people in some localities in the district (Ambasta *et al.*, 1992, Chopra *et al.* 1992, Dwivedi *et al.* 2005, Kritikar and Basu, 1991). During the present investigation some plants with new ethnomedicinal uses are reported on the contrary to the previous report.



Map 1 Location map of Madhya Pradesh and study area of Satna district.

2. Methodology

As suggested by earlier worker (Jain and Goel, 1995) regular field trips to different localities of Satna district were conducted during 2014 and 2015 for collecting ethnobotanical data. The tribal people, local traditional healers known as *Ojha*, *Vaidya* and the priests known as *Jankar* were contacted and discussed separately to collect information regarding the ethnomedicinal use of the plants. Common information obtained from more than one source has been included in this paper. It has been cross-checked and found that no such reports are published in literatures (Ahirwar, 2015, Verma *et al.* 1995, Khan *et al.* 2005, Kirtikar and Basu, 1991; Ambasta *et al.*, 1992; Chopra *et al.*, 1992, Khare and Khare, 1999; Samvatsar *et al.*, 1999; Dwivedi *et al.*, 2005; Jain *et al.*, 2006). The medicinal value of each plant was enumerated according their botanical name followed by family name in brackets, local name in inverted comma and ethnomedicinal uses.

3. Results

Enumeration:

- 1. *Allium sativum* L.** (Liliaceae), 'Lahsun'
Use: Bulb (200gm) and *Sesamum indicum* seed oil (1kg) are boiled together and is applied externally on the affected part.
- 2. *Anogeissus latifolia* (Roxb. ex DC.) Wall.** (Combretaceae), 'Dhawa'
Use: Leaf paste or powder cooked in mustard oil is applied externally on the affected part.
- 3. *Argyrea nervosa* (Burm. f.) Bhoj.** (Convolvulaceae), 'Karembu'
Use: Root powder (3gm) with warm water or root decoction (4 teaspoon) is taken once daily.
- 4. *Boerhaavia diffusa* L.** (Nyctaginaceae), 'Punarnawa'
Use: Root decoction and *Zingiber officinale* rhizome powder mixed together in a proportion of 4:1. The decoction (20ml) is taken once daily for 7 days. Leaves are cooked and eaten regularly to cure rheumatic pain.
- 5. *Calotropis gigantea* (L.) R. Br.** (Asclepiadaceae), 'Akwan'
Use: A bunch of leaves are tied together and cut. The cut end is heated in a pot and a hot treatment is given to the affected part.
- 6. *Cissus repens* Lam.** (Vitaceae), 'Hadjod'
Use: The tuber paste is applied on the affected part and at the same tuber powder (1 teaspoon) with warm water is taken once daily.
- 7. *Citrus medica* L.** (Rutaceae), 'Nembu'
Use: Equal amount of fruit juice and coconut oil are mixed together and is applied externally after washing the affected part with warm water.
- 8. *Clerodendrum phlomidis* L.f.** (Lamiaceae), 'Gulmenhdi'
Use: Leaves are cooked in mustard oil and is applied on the affected part.
- 9. *Costus speciosus* (Koen. ex Retz.) Smith** (Costaceae), 'Keukand'
Use: Rhizome paste with *Ricinus communis* seed oil is applied externally on the affected part.
- 10. *Crateva nurvala* Buch.-Ham.** (Capparaceae), 'Varuna'
Use: Bark powder (1 teaspoon) with *Piper nigrum* fruit (21 numbers) powder is taken once daily for 21 days.
- 11. *Croton sparciflorus* Vahl.** (Euphorbiaceae), 'Ban Tulsi'

Use: Bark paste is applied over the joints and bandaged to cure rheumatic swelling and pain.

- 12. *Cryptolepis dubia* (Burm.f.) M.R.Almeida** (Apocynaceae), 'Kala bel'

Use: Stem (about 4 inches long) is crushed to paste and is taken with butter milk (50ml) to cure rheumatic pain.

- 13. *Flemingia stricta* Roxb.** (Fabaceae), 'Kerala plants'

Use: Root (1 kg) is crushed and cooked in mustard oil (8 kg). It is filtered and the filtrate is applied on the affected part.

- 14. *Gardenia latifolia* Aiton** (Rubiaceae), 'Papda'

Use: Root decoction (10ml) is taken 2 times daily and at the same time warm root paste is applied on the affected part and bandaged to get relieve from rheumatic pain.

- 15. *Gloriosa superba* L.** (Colchicaceae), 'Kalihari'

Use: Tuber is crushed to paste. Warm paste is applied on the affected part to cure rheumatism.

- 16. *Holarrhena antidysenterica* Wall ex G.Don** (Apocynaceae), 'Doodhi'

Use: Root bark (10 gm) is boiled in water (400ml) and decoction (100ml) is taken 1-2 times daily in empty stomach.

- 17. *Hygrophila auriculata* (Schum.) Heine** (Acanthaceae), 'Kateela'

Use: Crushed root is fried with *Ricinus communis* seed oil and is applied externally on the affected part.

- 18. *Mallotus philippensis* (Lam.) Muell.-Arg.** (Euphorbiaceae), 'Kamala'

Use: Root crushed to paste with *Ricinus communis* is applied externally on the affected part.

- 19. *Marsdenia tenacissima* (Roxb.) Moon** (Asclepiadaceae), 'Maruabel'

Use: Root bark powder (100gm) and *Piper nigrum* fruit powder (15gm) are mixed together and the powder (5gm) with cow milk (one cup) is taken once daily for 20-30 days.

- 20. *Moringa oleifera* Lam.** (Moringaceae), 'Munga'

Use: Stem bark crushed with cow's urine and is warmed. The warm paste is applied on the affected part.

Equal amount of stem, *Datura metel* root and *Zingiber officinale* rhizome are crushed and cooked in mustard oil. The cooked oil is mixed with *Aloe vera* leaf pulp and is applied externally on the affected part.

- 21. *Ocimum sanctum* L.** (Lamiaceae), 'Tulsi'

Use: Leaf extract (50ml) is cooked in cow ghee (10gm). The paste obtained is mixed with *Piper nigrum* fruit powder (6gm) and the mixture (3gm) is taken 2 times daily.

- 22. *Operculina turpethum* (L.) Silva Manso** (Menispermaceae), 'Pithori'

Use: Equal amount or root, *Cissampelos pareira* root and *Pueraria tuberosa* tuber are crushed together and is applied on the affected part and bandaged to cure rheumatic pain.

- 23. *Paederia foetida* L.** (Rubiaceae), 'Gandhali'

Use: Fresh leaves (4 numbers) are chewed once daily in the morning or cooked leaves are eaten to cure rheumatic pain. Leaves (1kg) are cooked in mustard oil and filtered. The filtrate is applied on the affected part to cure rheumatic pain and swelling.

- 24. *Pergularia daemia* (Forsskal.) Chiov.** (Asclepiadaceae), 'Baadi Bel'

Use: Leaves are boiled in mustard oil and the oil is applied externally on the affected part.

- 25. *Pueraria tuberosa* (Willd.) DC.** (Fabaceae), 'Patal kumhda'

Use: Tuber paste is applied on the affected part to cure rheumatic swellings.

26. *Semecarpus anacardium* L.f. (Anacardiaceae), ‘Bhelma’

Use: Fruit is crushed and boiled with rice. The rice is taken to get relief from the suffering.

27. *Senna tora* L. (Caesalpiniaceae), ‘Chakauda’

Use: Seeds crushed with cow’s urine and applied on joint to get relief from rheumatic swelling and pain.

28. *Soyamida febrifuga* (Roxb.) Juss. (Meliaceae), ‘Bakain’

Use: Root (1kg), Piper longum fruit (100gm), *Cassia angustifolia* leaf (50gm), and *Piper nigrum* fruit (50gm) are crushed together and filtered. The powder (1 teaspoon) is taken thrice daily.

29. *Tabernaemontana divaricata* (L.) R. Br. ex Roem & Schult. (Apocynaceae), ‘Sadabahr’,

Use: Equal amount of root powder mixed with mustard oil is applied externally on the affected part.

30. *Terminalia bellirica* (Gaertn.) Roxb. (Combretaceae), ‘Behera’

Use: Seed oil is applied to on the affected part.

31. *Tinospora cordifolia* (Willd.) Hook. f. & Thoms. (Menispermaceae), ‘Giloy’

Use: Stem decoction (50 ml) with honey is taken once daily in empty stomach. Equal amount of stem and *Justicia adhatoda* leaf and *Cassia fistula* fruit are slightly crushed and boiled to obtain a decoction. The decoction with a little castor oil is applied externally on the affected part atleast for 15 days.

32. *Trigonella foenum-graecum* L. (Fabaceae), ‘Methi’

Use: Seeds (5gm) are soaked in a glass of water overnight and chewed in the morning in empty stomach to get relief from rheumatic pain.

33. *Ventilago maderaspatana* Gaertn. (Rhamnaceae), ‘Pitti’

Use: Seed oil is applied on affected part 2-3 times daily.

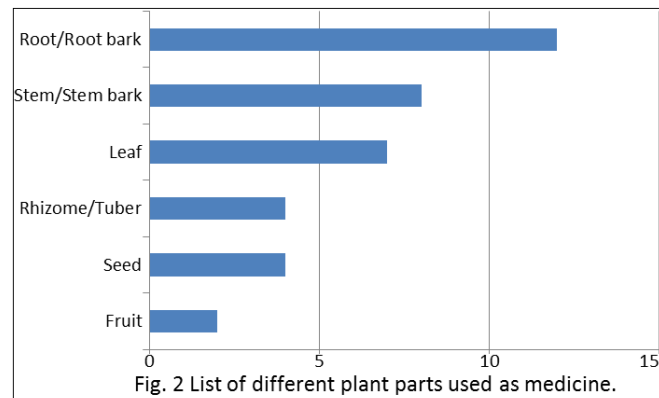
34. *Vitex negundo* L. (Lamiaceae), ‘Nirgundi’

Use: Gently warm leaf paste is applied on the affected part

35. *Wattakaka volubilis* (L.f.) Stapf (Asclepiadaceae), ‘Akad bel’

Use: Equal amount of bark and *Pueraria tuberosa* root powder mixed together and the powder (2 teaspoon) is taken once daily after the meal.

(22.86%), 7 species of each shrubs (20.0 %) and 9 herbs (25.71%), and 1 other species (2.86%) (fig.1). Out of 35 species 13 species are consumed orally, 20 species meant for external application and 2 species are used by both means (fig.2).



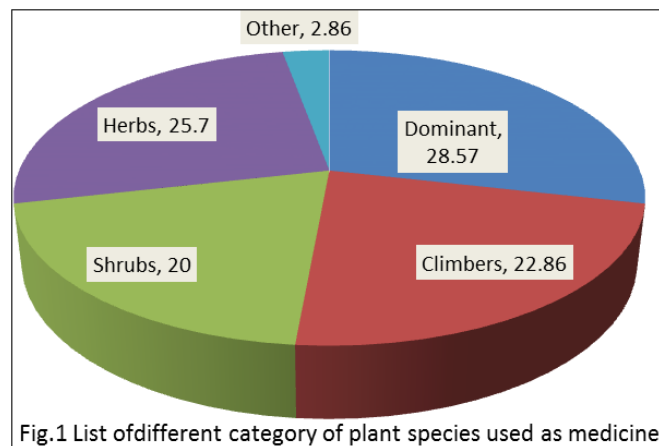
Different plant parts are used in the preparation of formulations. Generally plant part from a single plant is used in treatment of rheumatism, but in some cases a mixture of more than one plant (with different plant parts) are included in preparation of formulations. On the basis of analysis, data reveals the most used plant part in medicine is root/root bark (12 prescriptions) followed by stem/stem bark (8 prescriptions), leaf (7 prescriptions), rhizome/ tuber (4 prescriptions), Seed (4 prescriptions) and fruit (2 prescriptions) (fig. 2).

The present paper highlights on 17 plant species with new ethnomedicinal uses which are used against rheumatism. These plants are new reports or if reported earlier then their parts used may be different from that of the previous one. The plant species include are *Anogeissus latifolia*, *Cissus repens*, *Clerodendrum phlomidis*, *Costus speciosus*, *Croton roxburghii*, *Cryptolepis buchananii*, *Ervatamia divaricata*, *Flemingia stricta*, *Gardenia latifolia*, *Marsdenia tenacissima*, *Ocimum tenuiflorum*, *Operculina turpethum*, *Pittosporum wrightii*, *Premna serratifolia*, *Soyamida febrifuga*, *Ventilago maderaspatana*, *Wattakaka volubilis*.

The use of plant resources as remedies by mankind is probably as ancient as the creation of man himself. The aforesaid uses are the ones, practiced in day-to-day life of tribals living in and around forests. The use of traditional medicine for rheumatism is widespread in these localities because of the unavailability of modern medical facilities and expensive medicare system to which these tribal people are unable to afford.

4. Conclusion

Traditional healthcare practices of indigenous people pertaining to human health are termed as ethnomedicine. Ethnomedicine is the mother of all other systems of medicine. Rheumatism is one of the major health challenges worldwide and allopathic medicine has not been successfully in finding long lasting relief. Many plant species are traditionally use for the treatment of pain and autoimmune diseases, and some have been investigated for their efficacy with positive results. In Japan 60-70% of



The investigation revealed that the medicinal plant of 35 species was belonging to 35 genera and 22 families. Among all the species, trees are found to be dominant represented by 10 species (28.57%) followed by 8 species of climbers

allopathic doctors prescribe traditional medicine for their patients (Bussmann and Glenn, 2011).

The present study revealed that the traditional knowledge on herbal medicine of the people of Satna district is fast declining because of lack of interest of local people to learn this age old practice from the barefoot practitioners. The present findings for the treatment of rheumatism require further research, while the efficacy of the various indigenous formulations needs pharmacological validation.

5. Acknowledgement

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