



Ethnomedicine for Rheumatism by the Tribals of Khammam District, Andhra Pradesh

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Abstract

The paper deals with 53 species of angiosperms belonging to 49 genera and 34 families employed against rheumatism by the tribals of Khammam district. Ethnomedicinal information about their vernacular names, plant product or parts used, form of application and method of administration, etc. are gathered. The data accrued are compared with the available literature. Of the 53 practices 27 are found to be new.

Keywords: Ethnomedicine, rheumatism, tribals, Khammam district.

1. Introduction

Rheumatoid arthritis is a disease caused due to the chronic inflammation of synovial lining of joints; the synovium becomes thick leading to development of swelling around joints and tendons. The characteristic symptoms are pain and stiffness of the joints. The chronic inflammation occurs due to the continuous production of auto-antibodies called rheumatoid arthritis factor. This is a common disease throughout the world among all age groups.

2. Study Area

Khammam district is situated in the southern part of Andhra Pradesh state between 16° 45' and 18° 35' N latitude and 79° 47' to 81° 47' E longitude occupying an area of 16,029 sq. km of which forests occupy 52.6%. It has the distinction of having the highest tribal population in the state (682,617; 26.47% as per 2001 census). It is inhabited by *Koya*, *Lambada*, *Gond*/*Naikpod*, *Yerukula*, *Nayak* and *Konda Reddi* tribals. These people who live in remote areas of the region

under study, treat their ailments with plant remedies on the basis of their rich ethnobotanical knowledge.

3. Methodology

During 2008–2012, an ethnobotanical field survey was conducted in the tribal villages of the district. Regular field visits were arranged in the tribal areas of study area and reputed traditional medicine men, locally known as *vaidyas* and local tribal elderly people are requested to provide information on use and mode of preparation along with fresh specimen of the plant concerned. The first hand information about the plants and plant parts used as traditional remedies against rheumatism was collected from the tribal habitats. The collected plant specimens were identified and deposited in the Herbarium of the Department of Botany, Andhra University, Visakhapatnam.

4. Enumeration

The total information is arranged in alphabetical order in the following manner: botanical name, family, vernacular

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name, Sanskrit name, Hindi name, English name, plant part and some formulations of the part used.

Albizia amara (Roxb.) Boivin (Mimosaceae) VN: Narlingam S: Krishna sirish E: Bitter albizia: *Thirty ml of stem bark decoction is taken twice a day for 7 days.

Amaranthus viridis L. (Amaranthaceae) VN: Errathotakura, Seethajada S: Gandira E: Green amaranth: *Root decoction is administered in doses of three spoons twice a day for 5 days.

Areca catechu L. (Arecaceae) VN: Poka S: Pugah H: Supari E: Arecanut tree: *Five g of stem bark paste is taken with a cup of water once a day till cure.

Argyreia nervosa (Burm.f.) Boj. (Convolvulaceae) VN: Samudrapala S: Samudra palka H: Samandar E: Elephant creeper: *Ten ml of root decoction is administered once a day for 3 days.

Artocarpus heterophyllus Lam. (Moraceae) VN: Panasa S: Kantaphala H: Kanthal E: Jack fruit: *Ten ml of root decoction is administered daily twice till cure.

Artocarpus lacucha Roxb. ex Buch.-Ham. (Moraceae) VN: Kamma regu E: Monkey jack: *Thirty ml of tender fruit juice is administered twice a day for 10 days.

Barleria prionitis L. (Acanthaceae) VN: Gobbi S: Kantakuranta H: Kat-sareya E: Thronnail dye: Thirty ml of whole plant decoction is taken twice a day till cure.

Barringtonia acutangula (L.) Gaertn. (Barringtoniaceae) VN: Kadapa S: Samudraphalah H: Samudraphal E: Indian oak: *Ten ml of stem bark decoction is administered daily twice till cure.

Calycopteris floribunda Lam. (Combretaceae) VN: Danti, Geddapu teega S: Susari H: Kokaray: *Thirty ml of whole plant decoction is administered twice a day for 7 days.

Cinnamomum camphora (L.) Nees & Eberm. (Lauraceae) VN: Karpuramu S: Karpurah H: Kapur E: Camphor tree: *Latex mixed with coconut oil is warmed and applied on the painful joints.

Cinnamomum zeylanicum Garc. ex Bl. (Lauraceae) VN: Dalchina chekka S: Darusita H: Dalchini E: Cinnamon tree: *Stem bark decoction is administered orally in doses of 30 ml once a day till cure.

Cissus pallida (Wight & Arn.) Steud. (Vitaceae) VN: Nalla jera E: Endeavor river vine: *Ten ml of root decoction is administered once a day for 7 days.

Citrullus colocynthis (L.) Schrad. (Cucurbitaceae) VN: Erripuchcha E: Bitter apple: Root, long pepper seeds are taken in equal quantities and pestled. Ten g of powder is taken along with one spoon of jaggery twice a day till cure.

Clerodendrum serratum (L.) Moon (Verbenaceae) VN: Bommalamarri S: Bharanghi H: Bharangi E: Beetle killer: Three g of root paste is administered along with one glass of water twice a day for 5–7 days.

Coccinia grandis (L.) Voigt. (Cucurbitaceae) VN: Kakidonda S: Bimb H: Kanduri E: Ivy gourd: Leaf juice is applied on the painful joints.

Coldenia procumbens L. (Boraginaceae) VN: Hamsa padi S: Tripakshi H: Tripungki E: Trailing coldenia: Leaf paste is applied on the affected areas once a day till cure.

Commiphora mukul Jacq. (Burseraceae) VN: Guggulu S: Guggulu H: Guggul E: Indian bellium: Half spoonful of gum paste mixed with a cup of water is administered twice a day till cure.

Costus speciosus (Koen.) Sm. (Zingiberaceae) VN: Chengalva kostu S: Canda H: Kebu E: Spiral ginger: Rhizome is powdered and administered in doses of 2 g with a cup of water twice a day till cure.

Cymbopogon flexuosus (L.) Rendle (Poaceae) Vn: Nimma gaddi E: Lemon grass: *Thirty ml of whole plant decoction is administered twice a day for 10 d. Whole plant paste is applied on the affected areas.

Dichrostachys cinerea (L.) Wight & Arn. (Mimosaceae) VN: Velthuru chettu S: Vellantarah H: Vurthuli E: Sick bush: Ten ml of root decoction mixed with one spoon of black pepper powder is administered orally once a day for 10 days.

Dodonia viscosa (L.) Jacq. (Sapindaceae) VN: Pulivavili E: Jamaicas switch sorrel: Ten ml of root decoction is administered once a day for 7 days.

Entada rheedii Spreng. (Mimosaceae) VN: Bojje, Gilla teega S: Gilla E: Giants rattle: Stem bark decoction is administered in 30 ml dose daily once till cure.

Erythrina variegata L. (Fabaceae) VN: Badisa S: Paribhadrah H: Pharhad E: Indian coral tree: Ten ml of stem bark decoction is administered orally once a day till cure.

Euphorbia tirucalli L. (Euphorbiaceae) VN: Pala teega, Urukalli, Udiradhara S: Dudhika H: Sehund E:

Round milk hedge : Stem is roasted with paddy straw and the extract in two spoonful of juice mixed with one spoonful of castor oil is administered orally twice a day for 3 days.

Gmelina arborea Roxb. (Verbenaceae) VN: Burugu teku, Nela gummudu S: Bhadrarni H: Jugani-chukur E: Candahar tree: Ten ml of root decoction is administered orally once a day for 10 to 15 days.

Helicteres isora L. (Sterculiaceae) VN: Paladugu S: Avarthani H: Marodphali E: Bastard cedar: *Ten ml of root decoction is administered orally daily twice till cure.

Hibiscus surattensis L. (Malvaceae) VN: Adavi gogu E: Bush sorrel: *Root decoction is taken in two spoonful twice a day for 7 days.

Holostemma ada-kodien Schult. (Asclepiadaceae) VN: Dudipala theega S: Jivanti H: Rani maroi E: Ring-coronel: *Half spoon of leaf paste mixed with a pinch of black pepper powder is administered internally twice a day for 15 days.

Hyptis suaveolens (L.) Poit. (Lamiaceae) VN: Sima tulasi, Pichi tulasi S: Bhustrna H: Vilaiti-tulsi E: Hyptis: Two spoonful of seed powder along with a cup of milk is administered twice a day for 10 days.

Ipomoea hederacea Jacq. (Convolvulaceae) VN: Kala dana E: Morning glory: *Five g of seed paste is administered with water twice a day for 7 days.

Ipomoea obscura (L.) Ker-Gawl (Convolvulaceae) VN: Neeti thutu kura E: Obscure morning glory: *Whole plant decoction is administered in doses of 30 ml twice a day till cure.

Jatropha glandulifera Roxb. (Euphorbiaceae) VN: Adaviamudamu S: Nikumbha S: Vanajayapala H: Ban jayapal E: Purple jatropha: Seed oil is applied on the affected areas daily twice till cure.

Lantana camara L. (Verbenaceae) VN: Lavangipulu S: Caturangi H: Lantana E: Wild sage: Fifteen ml of root decoction is administered orally once a day till cure.

Lawsonia inermis L. (Lythraceae) VN: Gorintaku S: Kuravaka H: Mehanda E: Henna: *Three spoonful of root decoction is administered once a day till cure.

Limonia acidissima L. (Rutaceae) VN: Velakkaya S: Kapittha H: Bell E: Elephant apple: *Two spoonful of stem bark juice is taken twice a day for 3 days.

Mallotus philippensis (Lam.) Muell.-Arg. (Euphorbiaceae) VN: Sindhuram S: Recanakah H: Sindur E:

Kamala tree : Fifty ml of flower decoction is administered twice a day till cure.

Mangifera indica L. (Anacardiaceae) VN: Mamidi chettu S: Amrah H: Aam E: Mango: Three spoonful of stem bark decoction is administered twice a day till cure.

Mucuna pruriens (L.) DC. (Fabaceae) VN: Duladundi Dulagondi S: Kapi kacchu H: Kivach E: Cowitch: *Two spoonful of root decoction is taken once a day for 10 days.

Premna serratifolia L. (Verbenaceae) VN: Agnimaatha S: Arani H: Arani E: Headache tree: Three spoonful of leaf decoction mixed with one spoon of jaggery is taken orally twice a day till cure.

Radermachera xylocarpa (Roxb.) K. Schum. (Bignoniaceae) VN: Naguru E: Padri tree: *Three spoonful of stem bark decoction is administered once a day for 10 days.

Ricinus communis L. (Euphorbiaceae) VN: Amudamu S: Eranda H: Erandi E: Castor oil tree: Two spoonful of root decoction is taken twice a day for 10 days.

Sansevieria roxburghiana Schult. f. (Agavaceae) VN: Chamakada nara S: Muruva H: Murva E: Bow string hemp: *Leaf juice mixed with oil is boiled and applied externally on the affected areas once a day till cure.

Sarcostemma secamone (L.) Bennet (Asclepiadaceae) VN: Palatheega S: Dudhialata H: Dudhi E: Rosy milk weed: *Stem paste is applied externally on the effected parts twice a day for 30 days.

Stereospermum chelonoides (L.f.) DC. (Bignoniaceae) VN: Padiri, Kubera kasi E: Trumpet flower: Ten ml of root decoction is taken orally once a day till cure.

Strychnos nux-vomica L. (Longaniaceae) VN: Musini S: Kupilu H: Kuchila E: Snake wood: Stem bark paste boiled in sesame oil is massaged on the affected areas till cure.

Terminalia alata Heyne ex Roth. (Combretaceae) VN: Nallamaddi S: Asana H: Saj E: Black murdah: *Ten ml of root decoction is administered orally once a day for 3 days.

Terminalia arjuna (DC.) Wight & Arn. (Combretaceae) VN: Tella maddi S: Arjuna H: Arjun seadada E: Arjun myrobalan: *Ten ml of root decoction is administered orally once a day till cure.

Tinospora cordifolia (Willd.) Miers ex Hook. f. & Thoms. (Menispermaceae) VN: Tippa teega S: Guduchi

H: Amrit E: Gulancha tinospora: Thirty ml of whole plant decoction is taken internally twice a day till cure.

Trachyspermum ammi (L.) Sprague (Apiaceae) VN: Vamu aku S: Yawani E: Ajowan: *Thirty ml of leaf decoction is administered twice a day for 10 days.

Vitex negundo L. (Verbenaceae) VN: Vavilaku S: Nirgondi H: Nirgondi E: Negundo: Five g of root powder mixed with two spoons of cow ghee is roasted and eaten twice a day till cure.

Ximenia americana L. (Olacaceae) VN: Nakker, Kiriki, Iriki S: Kadarangi E: False sandal wood: *Stem bark decoction is taken orally once a day till cure.

Xylia xylocarpa (Roxb.) Taub. (Mimosaceae) VN: Bojja, Konda thangedu: Stem bark decoction is administered internally in 30 ml dose daily once till cure.

Yucca gloriosa L. (Liliaceae) VN: Chaga E: Spanish dagger: Three spoonful of root decoction is administered once a day till cure.

Ziziphus mauritiana Lam. (Rhamnaceae) VN: Regu S: Kola H: Kuvala E: Indian jujube: Three spoonful of stem bark decoction mixed with one spoon of honey is administered orally twice a day for 5–7 days.

5. Results and Discussion

To treat rheumatism local tribal medicinemen of Khammam district have traditional remedies. The present ethnobotanical survey yielded 53 species of plants covering 49 genera and 34 families. Trees are dominant (26) followed by shrubs (16) and herbs (11). Various plant parts like roots, bulbs, leaves, stem-bark, fruits, seeds, gum, latex or even the whole plants are used in the form of paste, decoction, juice, powder, oil, etc. The method of application and administration varied from patient to patient depending upon the intensity of the complaint. They are both used as external application or administered internally. Of the 34 families Verbenaceae is the most dominant family (5) followed by Euphorbiaceae (4); Convolvulaceae, Combretaceae, Mimosaceae, (each with 3 species); Lauraceae, Cucurbitaceae, Fabaceae, Asclepiadaceae, Bignoniaceae, Moraceae (each with 2 species) and the rest of the families each with one species. Of the 53 practices, 27 were found to be new [1–2]. *Erythrina variegata* and *Euphorbia tirucalli* are also used for curing rheumatoid disorders by Pawara,

Bhil, Konkani, Tadvil and Vanjari tribes of Jalgaon district of Maharashtra [3]. The former is also used for curing rheumatism by the Kanikkars of Western ghats of Tamil Nadu in addition to *Mallotus philippensis*, *Sansevieria roxburghiana*, *Tinospora cordifolia* and *Vitex negundo* [4]. *Dichrostachys cinerea*, *Ricinus communis* and *Vitex negundo* are also reportedly used for curing rheumatoid arthritis by Savara, Jatapu, Konda dora, Gadaba, Kutiya, and Yerukula tribes of Srikakulam district of Andhra Pradesh [5]. It is well established that an identical use of the same plant by different tribal groups indicates its established curative property and therapeutic significance [6]. It is not only essential to conserve such a wealth of information and wisdom found among the tribals but will also be rewarding to enumerate such details and devise modern biomedical system to meet the ever increasing clinical requirements of modern living. Hence the need for documenting the medicinal knowledge of the tribals is often stressed. In such a context these plants can be subjected to intensive clinical and pharmacological trials and their efficacy may be evaluated on scientific basis.

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