Ethnomedicine for stomach ache by the tribes of Srikakulam district, Andhra Pradesh

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Abstract

The paper deals with 31 species of plants covering 31 genera from 23 families used by the *Savara, Jatapu, Konda dora, Gadaba, Kuttiya* and *Yerukula* tribes of Srikakulam district, Andhra Pradesh for curing stomach ache. Family-wise analysis showed that the dominance of Rubiaceae with 4 species followed by Sterculiaceae, Fabaceae, Asteraceae, Asclepiadaceae, Acanthaceae (each 2) and others. Herbs are dominant with 12 species followed by trees (9), shrubs (8) and others. Root is used in 13 practices followed by leaf (7), stem bark (5) and others. 7 practices were found to be new or less known. The study is undertaken since there are no such ones in the region.

Keywords: Ethnomedicine, Stomach ache, Srikakulam district, Andhra Pradesh

1. Introduction

Stomachache is generally used to describe the pain originating within the abdominal cavity. It can be acute and sudden in onset, or the pain can be chronic and longstanding. It may be minor and of no great significance, or it can reflect a major problem involving one of the organs in the abdomen. This is a common disease and complaints received from all ages. Srikakulam district is the northern most part of Andhra Pradesh state, located within 18°5' - 19°12'N and 83°32' - 84°47'E and bounded by Orissa state on the North and Bay of Bengal in the East and South-East and the Vizianagaram district in the West and South-West. Though ranking very low both in area (5837 sp km) and in density of population among the districts of Andhra Pradesh, possesse considerably high density of tribal population in hilly and forest areas. The geographical area of the district is 5837 sq km and the forest area covers 70864.13 hectares. It is inhabited by 133,239 tribal people comprising of 5.74 per cent of the population (Anonymous 2001). The tribal communities include *Savara, Jatapu, Konda dora, Gadaba, Kuttiya* and *Yerukula* (Anonymous 2001). Exclusive publications on stomach ache in different parts of India by different tribes are not many (Mitra & Mukherjee, 2010; Sandhya Sri & Reddi, 2015; Suneetha & Reddi, 2017; Prasanthi *et al*., 2017) necessitating the present study.

2. Material and Methods

The ethnomedicinal data presented here is the outcome of a series of intensive field studies conducted over a period of five years (1997-2001) in 74 interior tribal pockets with good forest cover. The field trips were planned in such a manner so as to cover the selected tribal pockets in different seasons of an year. Each field trip was of 5-7 days duration covering 5-6 pockets a day. In addition to the randomly selected informants in the field, tribal villages

and shandies, 41 vaidhyas/medicine men have contributed their ethnomedicinal knowledge to the present study. Voucher specimens were prepared and deposited in the Herbarium of Botany Department (BDH), Andhra University, Visakhapatnam.

3. Enumeration

The plants are enumerated alphabetically with valid botanical name followed by family and vernacular (VN) and English names, locality, voucher number and part(s) used. Each ethnomedicinal practice is provided with the method of preparation, mode of administration, dosage and duration. Plants and practices marked with an asterisk (*) are considered to be new or lesser known.

Andrographis paniculata (Burm.f.) Nees Acanthaceae VN: Nelavemu E: King of bitters, Donubai, 1349, Root, Leaf

Roots and leaves are ground with black pepper and the filtrate is administrated in 3 spoonful twice a day for 3 days**.**

Anisomeles indica (L.) Kuntze Lamiaceae VN: Chinaranaberi E: Cat mint, Korada, 1340, Leaf

An infusion of the leaf is given in 2 spoonful twice a day for 3 days**.**

Aristolochia indica L. Aristolochiaceae VN: Nagasaramu E: Indian birthwort, Polla, 1153, Root

Roots are ground with black pepper and the extract is administered in 2 spoonful once a day for 5 days.

Asparagus racemosus Willd. Liliaceae VN: Pilli thegalu E: Asparagus, Vennela valasa, 1533, Root tuber

Root tubers are crushed with turmeric and the filtrate is administrated in 2 teaspoonful twice a day for 3 days.

Baliospermum montanum (Willd.) Mull. Arg. Euphorbiaceae VN: Chittiyamudamu E: Wild castor, Kotturu, 1226, Root

The roots are crushed with jaggery and the filtrate is taken orally for relief.

Barleria prionitis L. Acanthaceae VN: Mullugorinta E: Porcupine flower, Tankidi, 1001, Whole plant

5 ml of aqueous extract of whole plant is given twice a day for one week**.**

Borreria pusilla (Wall.) DC. Rubiaceae VN: Patchanuri E: False buttonweed, Gujji, 1480, Whole plant

Whole plant paste is applied on the belly for relief.

Cajanus cajan (L.) Millsp. Fabaceae VN: Kandi E: Red gram, Baleru, 1828, Leaf

*Leaf extract is administered in doses of 1 spoonful thrice a day for 3 days.

Calotropis gigantea (L.) R.Br. Asclepiadaceae VN: Jillidi E: Giant milkweed, Budumuru, 1852, Root

Roots are crushed with garlic and the extract is administered in 3 spoonful thrice a day till cure.

Cheilanthes tenuifolia (Burm. f.) Sw. Adiantaceae VN: Karra E: Lip fern, Malli, 1034, Root

Root paste is administered in doses of one pill of Bengal gram seed size twice a day with hot water for 7 days**.**

Clerodendrum serratum (L.) Moon Verbenaceae VN: Bommalamarri E: Turk's turban moon, Jayapuram, 2145, Root

Roots along with those of *Cissampelos pareira* and *Rauvolfia serpentina* taken in equal proportions are ground into powder. One spoonful of powder in 10 ml of water is given for children**.**

Cyperus rotundus L. Cyperaceae VN: Tunga E: Nut grass, Jadupalli, 1313, Corm

15 g of corms are boiled in 200 ml of water to prepare 100 ml of decoction. 50 ml of decoction is administered twice a day.

Dillenia indica L. Dilleniaceae VN: Revadachettu E: Elephant apple, Altiv, 1673. Leaf

*2 spoonful of leaf juice is taken twice a day for 2 days**.**

Elephantopus scaber L. Asteraceae VN: Yedduadugu E: Elephant foot, Sankili, 1405, Root

Roots along with fruits of *Helicteres isora* and bark of *Dalbargia sissoo* are taken in 2:1:1 proportion and 20 ml of extract is given twice a day for one day only.

Garuga pinnata Roxb. Burseraceae VN: Garugu E: Garuga, Rugada, 1549, Stem bark

Stem bark along with those of *Butea monosperma* and *Pterocarpus marsupium* and roots of *Tridax procumbens* taken in equal proportions are made into an extract. 20 ml of this extract is given twice a day for one day**.**

Haldina cordifolia (Roxb.) Ridsdale Rubiaceae VN: Kamba E: Haldu, Marripadu, 1825, Stem bark

Stem bark extract in doses of 2 spoonful is given twice a day for 3 days.

Helicteres isora L. Sterculiaceae E: Indian screw tree VN: Chamalanara E: Indian screw tree, Antharba, 1954, Fruit

Fruits along with roots of *Elephantopus scaber* and bark of *Dalbergia sissoo* are taken in 1:2:1 proportion. 20 ml of extract is given twice a day for one day only.

Kalanchoe lanceolata (Forssk.) Pers. Crassulaceae VN: Bhosam E: Kalanchoe, Baleru, 1352 , Leaf

Juice of leaves in doses of 1 spoonful is given twice a day for 5 days**.**

Lagerstroemia parviflora Roxb. Lythraceae VN: Chennangi E: Giant crape-myrtle, Tivvakonda, 1438, Leaf

*Leaves are crushed with those of *Mangifera indica* and *Syzygium cuminii* and the filtrate is administered in doses of 2 spoonful twice a day for 3 days**.**

Limonia acidissima L. Rutaceae VN: Velaga E: Wood apple, Gujji, 1822, Leaf

*2 table spoonful of fresh leaf juice with a pinch of black pepper is given till cure.

Luffa acutangula (L.) Roxb. Cucurbitaceae VN: Beera E: Ridged gourd, Jadupalli, 1337, Seed

Seed powder in doses of 1 spoonful is given with 1 glassful of warm water once a day for

about 5 days**.**

Lygodium flexuosum (L.) Sw. Lygodiaceae VN: Khorothi E: Vine like fern, Donubai, 1181, Root,

Root paste of about 15 g is given with one glass of water twice a day for about 3 days**.**

Morinda pubescens Sm. Rubiaceae VN: Chekkachettu E: Indian mulberry, Mahadeva valasa, 1907, Stem bark

*Stem bark is crushed with turmeric and the extract is administered in 2 spoonful dose twice a day till cure.

Pergularia daemia (Forssk.) Chiov. Asclepiadaceae VN: Juttiputivva E: Trellis vine, Kotturu, 1876, Root

*Roots are ground into paste with black pepper and the extract is administered in doses of 1 spoonful twice a day for 3 days.

Pterospermum xylocarpum (Gaertn.) Sant. & Wagh Sterculiaceae VN: Vuleka E: Corky leaved –bayur, Samarelli, 1867, Fruit

*Fruit decoction in doses of 1 spoonful is administered once a day for 3 days to infants.

Rubia cordifolia L. Rubiaceae VN: Kurramal E: Common madder, Budumuru, 1728, Root

2 spoonful of root decoction is given twice a day for 3 days.

Soymida febrifuga (Roxb.) A. Juss. Meliaceae VN: Somi E: Bastard cedar, Tivvakonda, 2929, Stem bark

Stem bark extract is given in 20-30 ml dose twice a day for 1 day**.**

Tephrosia purpurea (L.) Pers. Fabaceae VN: Yempali E: Wild indigo, Kennayyapeta, 2275, Root

Root extract mixed with a pinch of salt is administered in doses of 2 spoonful twice a day for 3 days.

Tridax procumbens L. Asteraceae VN: Palapalaku E: Coatbuttons, Marripadu, 2281, Root

Roots along with stem barks of *Butea monosperma,Garuga pinnata* and *Pterocarpus marsupium* taken in equal proportion are made into an extract and 20-30 ml of this is given twice a day for one day only**.**

Wrightia tinctoria (Roxb.) R. Br. Apocynaceae VN: Ankudu E: Pala indigo plant, Rugada, 1622, Stem bark

Stem bark along with fruits of *Helicteres isora* taken in equal proportions are made into an extract and 30 ml of it is given twice in a day for one day only.

Ziziphus oenoplia (L.) Mill. Rhamnaceae VN: Parimikampa E: Jackal jujube, Chandrammaghat, 1136, Root

2 spoonful of root extract with water is given twice a day for 3 days**.**

4. Results and Discussion

The paper deals with 31 species of plants covering 31 genera and 23 families used by the tribes of Srikakulam district for curing stomach ache. Rubiaceae is the dominant family with 4 species followed by Sterculiaceae, Fabaceae, Asteraceae, Asclepiadaceae, Acanthaceae (each 2 spp.) and others with one species each. Habitwise analysis showed the dominance of herbs

with 12 species followed by trees (9 spp.), shrubs (8 spp.) and climbers (2 spp.). Plant part-wise analysis showed the maximum utilization of root in 13 practices followed by leaf (7), stem bark (5), whole plant and fruit (2 each) and seed, corm and tuber (1 each). They are administered either in the form of powder, paste, juice, decoction, filtrate, extract or pill along with either water, warm water, salt, jaggery, garlic, black pepper or turmeric. Of the total 31 practices 25 involve single plant only followed by 1 practice involving two plants, 4 practices involving three plants and 2 practices involving four plants each. 7 practices were found to be new or less known (Jain, 1991; Kirtikar & Basu, 2003). Plants used for similar purpose in India and Bangladesh are *Aristolochia indica, Tephrosia purpurea* by the rural folk and *Yanadi* and *Nakkala* tribes of Chittoor district, Andhra Pradesh (Reddy *et al*., 1989); *Limonia acidissima* by the *Katkari, Kokana, Mahadeo koli, Thakar, Warli* tribes of Western Maharashtra (Upadhye *et al*., 1991), *Helicteres isora* by the *Sauria Paharia* tribes of Santhal Paragan, Bihar (Jha & Verma, 1996); *Gond, Kol, Baiga, Panica, Khairwar, Manjhi, Mawasi, Agaria* tribes of Rewa district, Madhya Pradesh (Shukla *et al*., 2010) and by the *Gond* tribe of Bhandara district, Maharashtra (Gupta *et al*. 2010); *Andrographis paniculata, Asparagus racemosus* by the *Yanadi, Nakkala, Irula, Yerukala, Sugali/Lambadi* and *Chenchu* tribes of Chittoor district, Andhra Pradesh (Vedavathy *et al*., 1997); *Andrographis paniculata* by the ethnic groups *Halakki, Kadukurba, Lambani* of Bidar district, Karnataka (Prashantkumar and Vidyasagar, 2006); *Asparagus racemosus, Elephantopus scaber* by the *Mullu kuruma* tribe of Wayanad district, Kerala (Silja *et al*., 2008); *Rubia cordifolia* in desert Ladakh (Ballabh & Chaurasia, 2009); *Wrightia tinctoria* by the local people of 11 districts of Karnataka (Shiddamallayya *et al*., 2010) and *Bhilla* tribe of Maharashtra (Kamble *et al*., 2010); *Helicteres isora, Tephrosia purpurea* by the *Rabha, Rajbanghsi, Santal, Munda, Oraon, Polia/Polly, Lepcha, Toto* tribes of North Bengal (Mitra & Mukherjee, 2010); *Andrographis paniculata, Asparagus racemosus, Cyperus rotundus* by the *Santhal, Kolha, Bathudi, Kharia, Mankidia, Gond* and *Ho* tribes of Mayurbhanj district, Orissa (Rout and Panda, 2010); *Aristolochia indica* by the *Chakma, Marma, Tripura* tribes of Chittagong Hill tracts of Bangladesh (Biswas *et al*., 2010); *Andrographis paniculata, Cyperus rotundus, Dillenia indica, Helicteres isora, Pergularia daemia, Tephrosia purpurea* by the *Bagata* tribe of Visakhapatnam district, Andhra Pradesh (Sandhya Sri & Reddi, 2015); *Andrographis paniculata, Asparagus racemosus, Cajanus cajan, Limonia acidissima, Morinda pubescens, Pterospermum xylocarpum, Tephrosia purpurea* by the *Savaras* of Andhra Pradesh (Prasanthi *et al*., 2017) and *Andrographis paniculata, Cajanus cajan, Lagerstroemia parviflora, Limonia acidissima* by the *Konda reddi, Konda dora, Konda kammara, Konda kapu, Manne dora* and *Valmiki* tribes of East Godavari district, Andhra Pradesh (Suneetha & Reddi, 2017).

Conclusion

Herbal medicines are like a blessing in tribal areas where modern facilities are not available. Many traditional medicines are now an accepted fact because of their better cultural acceptibility, better compatibility with the human body, lesser side effects and effectiveness. This knowledge will be useful for future pharmaceutical screening and and for the betterment of future mankind.

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