Plants used for natal healthcare in folk medicine of Kerala, India

Rasiya Beegam A & Nayar*TS
Tropical Botanic Garden and Research Institute, Palode, Thiruvananthapuram - 695 562, Kerala, India
E-mail : tsnayar@gmail.com

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This paper deals with 66 preparations made out of 58 plant species specifically employed in prenatal (14), postnatal (23) and child healthcare (29) in folk medicine of Kerala. Details about preparation and administration of medicine, plant parts used, local names, dosages and status of occurrence of species - wild, naturalised, cultivated or marketed, are provided. An analysis of these, 58 plant species shows that 37 species (63%) are native and the rest 21 species (36%) are naturalised exotics. Of the 37 native species, 14 species occur wild and the rest 23 species are either cultivated or planted.

Keywords: Natal and Child Healthcare, Folk medicines, Kerala

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Kerala is a narrow stretch of land extending for about 565 km along the West coast of the Indian peninsula. The state is positioned from 8.2° to 12.8° N parallel and 74.8° to 77.5° E meridian, and occupies an area of 38,863 sq km. Though Kerala represents only 1.18% of the total geographical area of India, the state supports 3.43 % of the total population of the country. Folk medicine is one of the 3 plant based healing systems in vogue in Kerala, the other 2 being tribal and Ayurvedic systems. Tribal medicine employs plants growing wild in the forests and is confined to forest dwelling tribals. In Kerala, these 3 methods of treatments (chikitsa) are distinguished with 3 distinct names: Gotra chikitsa (treatment of tribal medicine), Nattu chikitsa (treatment of folk medicine), and Ayurveda chikitsa (treatment of ayurvedic medicine).

The origin of folk medicine in Kerala reportedly dates back to c. 13th century AD when the monopoly of knowledge on Ayurveda and astronomy went down the Brahmanical hierarchy and settled among the lower castes who, in turn, got patronised by nonbrahmanical feudal chieftains and gradually by the well to do families. Ayurveda, astronomy and to some extent incantations were part of disease treatment in ancient Kerala. Though some attempts were made before independence in 1947 to collect data on folk medicine by Ainsile and Waring, no systematic documentation or study is available on folk medicine of Kerala or India and hence, its actual relationship with tribal or Ayurvedic system of medicine cannot properly be gauged. Its origin in different parts of India may possibly be different. In the art of healing, natal care (obstetrics) is fairly an advanced field in folk medicine of Kerala. The traditional birth attendants, locally called as vayattatties, are highly skilled in obstetric methods and possessed good knowledge on herbal home remedies, food and nutrition. Prenatal care, delivery, manipulation of abnormal presentations of foetus, resuscitation of the new born, postnatal care and paediatrics are dealt cautiously and safely by them. In natal care birth attendants employ a variety of herbal preparations and such folk knowledge is not kept as secrets, as generally practised by tribal communities. Medication is effected with full co-operation from female members of the family of expectant mothe.

Methodology

Information were collected personally from rural women by direct interviews and discussions. The resource persons included mothers and grandmothers of the age group of 25-80 yrs, besides traditional birth attendants. Care was taken to represent informants from 3 dominant religions (Hindu, Christian and Muslim), 3 major geographical locations [southern (Travancore), central (Cochin) and northern (Malabar) Kerala]. Identity and local names of all the

*Corresponding author
folk plants mentioned by the informants were collected and identified with the help of local floras and deposited at the Herbarium of Tropical Botanic Garden and Research Institute (TBGT).

Information gathered on natal healthcare are presented under the sub-heads prenatal, postnatal and child care as single and compound preparations. Quantity prescribed is roughly equated to ml and gm. The term pre-natal as used in the text means a duration of 9 months before delivery and postnatal, 3 months after delivery. Folk medicines described under child health care are those generally prescribed to children of up to 3 yrs and below. The text is arranged in the following sequence: Scientific name, family, Malayalam name, nativity and nature of occurrence (planted/cultivated/market), parts used and uses. Family, Malayalam name, nativity and nature of occurrence are not repeated when the species is mentioned for another preparation.

Results

Pre-natal care

A. Single preparation


Decoction prepared in 200 ml water with about 25 gm roots is taken twice a day for vomiting.

*Biophytum sensitivum* (L.) DC. (Oxalidaceae), *Mukkutti/Teendarnazhi*, native (wild), whole plant.

About 100 gm plant paste cooked with 50 gm rice flour and palm sugar is taken internally 2-3 times daily for general health.

*Cissampelos pareira* var. *hirsuta* (Buch.-Ham. ex DC.) Forman (Menispermaceae), *Malatangi*, native (wild), leaves.

About 100 gm leaf paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for back pain.

*Citrus medica* L. (Rutaceae), *Cherunaragam*, native (planted), fruit.

About 25 ml fruit juice sweetened with sugar and mixed in 300 ml water are taken internally 3-4 times daily for vomiting.

*Crocus sativus* L. (Iridaceae), *Kumkuma-poovu*, exotic (cultivated, marketed), dried stigma.

One to three stigmas boiled in 200 ml cow milk are taken twice daily for developing better skin complexion of babies.

*Cocos nucifera* L. (Arecaceae), *Tengu*, native (cultivated), inflorescence.

About 50 gm inflorescence paste cooked with 100 gm rice flour and palm sugar is eaten 2-3 times daily for general health.

*Mimosa pudica* L. (Mimosaceae), *Tottavati*, exotic (naturalised), roots.

About 100 gm root paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for general health.

*Moringa oleifera* Lam. (Moringaceae), *Muringa*, native (cultivated), leaves.

About 100 ml decoction of leaves with sugar is taken 1-2 times daily for developing appetite.

*Ocimum tenuiflorum* L. (Lamiaceae), *Tulasi*, native (planted), leaves.

Seven leaves are eaten raw everyday morning in fever.

*Sidha rhombifolia* L. (Malvaceae), *Kurumtotti*, native (wild), roots.

Decoction prepared in 100 ml water with about 25 gm roots, 10 gm cumin seeds and 200 ml milk is taken twice a day in constipation.

B. Compound preparation


About 10 ml citrus fruit juice and 10 ml ginger juice are mixed and sweetened with sugar is taken 1-2 times for developing appetite.


About 50 gm seed juice of *P. granatum* and 25 gm root powder of *G. glabra* with a little honey and ghee are taken to facilitate easy delivery.


About 25 ml seed juice of *P. granatum*, 25 ml juice from the stem of *S. officinarum* and 10 ml juice from the rhizome of *Z. officinale* are sweetened with sugar and is taken internally twice a day for developing appetite.

d. (i) *Saraca asoca* (Roxb.) Wilde (Caesalpiniaeae), *Ashokam*, native (planted), stem bark, (ii) *Coscinium fenestratum* (Gaertn.) Colebr. (Menispermaceae), *Maramanjal*, native (wild), stem bark.

Decoction from 50 gm stem bark of *S. asoca* and 50 gm stem bark of *C. fenestratum* is taken in 150 ml water 1-2 times daily for bleeding.
Post-natal care

A. Single preparation

Asparagus racemosus Willd. (Liliaceae), Shatavari, native (planted), root tuber.

About 100 gm tuber crushed and boiled in 100 ml of water and 100 ml of cow milk sweetened with sugar is taken every morning for enhancing lactation.

Azima tetracantha Lam. (Salvadoraceae), Esanku, native (wild), leaves.

About 100 gm leaf paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily in cough.

Carica papaya L. (Caricaceae), Papaya, exotic (cultivated), fruit.

Ripe fruits are taken after food to enhance lactation.

Curcuma longa L. (Zingiberaceae), Manjal, native (cultivated), rhizome.

About 100 gm rhizome paste cooked with 50 gm rice flour and palm sugar is taken internally 2-3 times daily in stomachache.

Cyperus rotundus L. (Cyperaceae), Muttanga, native (wild), root tuber.

Tuber paste is applied on breast to enhance lactation.

Emilia sonchifolia (L.) DC. (Asteraceae), Muyalchevian, native (wild), whole plant.

About 100 gm plant paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for general health.

Garcinia gummigutta (L.) Robs. (Clusiaceae), Kudampuli, native (planted), fruit rind.

Dried fruit rind is consumed as such or through various culinary preparations in constipation.

Gossypium arboreum L. (Malvaceae), Paruti, native (planted), leaves.

About 100 gm leaf paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for general health.

Hemidesmus indicus (L.) R. Br. (Asclepiadaceae), Naruneendi, native (wild), roots.

Decoction prepared in 100 ml water with about 25 gm roots and 100 ml cow milk and reduced to half the volume is taken every day for lactation.

Jasminum grandiflorum L. (Oleaceae), Pichi, native (cultivated), flowers.

About 100 gm crushed or uncrushed flowers are kept adressed on breast with cotton in breast engorgement.

Leucas aspera (Willd.) Link. (Lamiaceae), Tumba, native (wild), leaves.

About 100 gm leaf paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for general health.

Murraya koenigii (L.) Spreng. (Rutaceae), Curryvepila, native (cultivated), leaves.

About 100 gm leaf paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for stomach disorder.

Phyllanthus amarus Schum. & Thonn. (Euphorbiaceae), Keezharnelli, exotic (naturalised), leaves.

About 100 gm paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for general health.

Ricinus communis L. (Euphorbiaceae), Avanakku, exotic (naturalised), seeds.

Oil exposed from seeds (caster oil) is applied on breast for lactation.

Saraca asoca (Roxb.) Wilde, flowers.

About 100 gm seed paste cooked with 50 gm rice flour and palm sugar is consumed 2-3 times daily for general health.

Trigonella foenum- groecum L. (Papilionaceae), Uluva, exotic (cultivated), seeds.

About 25 gm seed powder mixed in 200 ml cow milk is taken for enhancing lactation.

Xeromphis uliginosa (Retz.) Maheswari (Rubiaceae), Kara, native (wild), leaves.

About 100 gm leaf paste cooked with 50 gm rice flour and palm sugar is taken 1-2 daily for general health.

Zingiber officinale Rosc., rhizome.

Decoction prepared in 200 ml water with 25 gm dry rhizome and palm sugar is taken twice a day in stomach disorder.

B. Compound preparation

a. (i) Nigella sativa L. (Ranunculaceae), Karimpeeragam, exotic (cultivated, marketed), seeds,

(ii) Ventilago maderaspatana Gaertn. (Rhamnaceae), Vembadam, native (wild), root bark.

About 25 gm seeds and 25 gm root bark boiled in 100 ml coconut oil are applied for skin care.

b. (i) Piper nigrum L. (Piperaceae), Kurumulaku, native (cultivated, marketed), fruits,

(ii) Tamarindus indica L. (Caesalpiniaceae), Puli, exotic (planted), fruit pulp.
Decoction prepared in 200 ml water with about 10 gm seeds of *P. nigrum* and 10 gm fruit pulp of *T. indicus* is taken twice a day in stomach disorder.

c. (i) *Allium cepa* L. (Liliaceae), *Chuvannulli*, exotic (cultivated, marketed), bulbs. (ii) *Allium sativum* L. (Liliaceae), *Vellulli/Poodu*, exotic (cultivated, marketed), bulbs.

About 200 gm bulb paste cooked with 50 gm rice flour and palm sugar is consumed once in a week for blood purification.


About 25 L water boiled with the above plant parts (9 species) is used to steam the body and afterwards to bathe morning and evening for general health.

**Child care**

**A. Single preparation**

*Acorus calamus* L. (Araceae), *Vayambu*, native (cultivated), rhizome.

Rhizome grated with honey on earthen vessel is given for sweet voice.

*Allium sativum* L., bulbs.

One or two cloves of crushed bulbs boiled in 200 ml cow milk is administered in stomach disorder.

*Azadirachta indica* A. Juss. (Meliaceae), *Vepu*, native (planted), leaves.

Leaf paste is applied on body for scabies and itching. About one gm leaf paste is given as vermifuge.

*Citrus medica* L., fruit.

About 10 ml fruit juice mixed with 5 ml honey and 2.5 ml glycerine is given 1-2 times daily in cough.

*Cocos nucifera* L., oil.

Oil is used for massaging babies for better skin complexion.

*Coleus amboinicus* Lour. (Lamiaceae), *Njavar/Panikurka*, exotic (cultivated), leaves.

A few drops of juice from gently warmed leaves are administered 2-3 times daily in fever.

*Crocus sativus* L., dried stigma.

One to three stigmas boiled in 200 ml cow milk is given to enhance skin complexion.

*Curcuma longa* L., rhizome.

Rhizome paste is applied on body for scabies and itching. About 25 gm rhizome powder boiled in 100 gm caster oil is applied externally to dry umbilical cord.

*Cyperus rotundus* L., root tuber.

One or two crushed tubers boiled with about 200 ml cow milk are given in stomach disorder.

*Elettaria cardamomum* (L.) Maton (Zingiberaceae), *Elam*, native (cultivated), seeds.

Five to seven crushed seeds boiled in 200 ml cow milk are given orally for stomach disorder.

*Eleusine coracana* (L.) Gaertn. (Poaceae), *Kooavaragu/Panjapallu*, native (cultivated), seeds.

About 25 gm flour from seeds sweetened with sugar boiled in about 200 ml water or cow milk is given as supplementary food.

*Ferula asafoetida* L. (Apiaceae), *Palkayam*, exotic (cultivated, marketed), resin.

About 200 mL cow milk boiled with 0.5 gm resin is administered in stomach disorder.

*Maranta arundinacea* L. (Marantaceae), *Koova*, exotic (cultivated, marketed), rhizome.

About 10 gm starch boiled with about 200 ml water and sweetened with sugar is given in dysentery.

*Moringa oleifera* Lam., leaves.

About 10 ml leaf juice is administered once a day for general health.

*Musa paradisiaca* L. (Musaceae), *Vazhakkav/Nendrakka/Ettakkaya*, native (cultivated), fruit.

About 20 gm flour from raw fruits sweetened with sugar boiled in about 200 ml water or cow milk is given as supplementary food.

*Ocimum tenuiflorum* L., leaves.

About 10 ml leaf juice of *O. tenuiflorum* mixed with a few drops of garlic juice and a little asafoetida is given internally 1-2 times daily as vermifuge. Three to five drops of juice expressed from leaves are administered in fever. Water warmed with a few crushed leaves and flowers is used for bathing.

*Piper betle* L. (Piperaceae), *Vettilla*, exotic (cultivated, marketed), leaves.

Three to five drops of leaf juice administered in stomach disorder.

*Punica granatum* L., fruit rind.

Decoction prepared in 200 ml water with 1-2 pieces of fruit rind is administered in dysentery.

*Ricinus communis* L., seeds.
About 5 ml caster oil is applied on head and massaged, before bath twice in a week as hair tonic.

_Ruta graveolens_ L. (Rutaceae), _Aruta/Shatapu_, exotic (planted), leaves and flowers.

Leaves and flowers are tied around waist using a black thread for the disease locally known as _chedi_—which is fairly common in rural Kerala. Health of the child is affected by loss of appetite, stomach pain and loose motion. Development of a depression at the soft circular spot on head, palms of hands smelling fish when rubbed and motion coloured green are the symptoms.

_Santalum album_ L. (Santalaceae), _Chandanam_, endemic (marketed), wood.

Sandal wood paste is applied on head after shaving off hair for better and thick hair growth.

_Saraca asoca_ (Roxb.) Wilde, flowers.

Flowers boiled in coconut oil is applied on body for scabies and itching.

B. Compound preparation

a. (i) _Ocimum tenuiflorum_ L., young leaves, (ii) _Zingiber officinale_ Rosc., rhizome.

About 1-2 gm of paste prepared from young leaves and rhizomes is given twice a day in dry cough. Two to five drops of gently warmed leaf and rhizome juice are given twice a day in stomach pain.

b. (i) _Azadirachta indica_ A. Juss., leaves, (ii) _Cuminum cyminum_ L. (Apiaceae), _Jeerakon_, exotic (cultivated, marketed), fruits.

About 15 ml of _A. indica_ leaf juice mixed with _C. cyminum_ powder and sugar is given thrice a day in measles.

c. (i) _Curcuma longa_ L., rhizome, (ii) _Lawsonia inermis_ L. (Lythraceae), _Mylanchi_, exotic (planted), leaves.

About 100 gm rhizome and leaf paste boiled in 500 ml coconut oil is applied externally for scabies and itching.

Conclusion

An analysis of 58 species reported in this study shows that 37 species (63%) are native and the rest 21 species (36%) are naturalised exotics. Of the 37 native species, 14 species occur wild and the rest 23 species are either cultivated or planted.

Altogether 66 preparations are dealt in this work. Ten single and 4 compound preparations are employed for prenatal healthcare whereas 19 single and 4 compound preparations are used for postnatal care. There are 25 single and 4 compound preparations recorded for child healthcare. Compound preparations, in general, make use of 2 to 9 species. This is akin to the holistic concept of _Ayurveda_ which treats the individual as a whole and not merely the symptoms. In tribal medicine, single preparations are more frequent than compound preparations. Leaves are the main parts employed in single (15 cases) and compound (7 cases) preparations followed by roots (7 cases in single preparations) and stem bark (5 cases in compound preparations). Eleven preparations are used in stomach disorder of both mother and child, followed by 10 in general health, 6 in lactation, 4 in skin care, 3 each in fever and for developing appetite, 2 each in cough, constipation and back pain. Of the 66 preparations reported here 51 are prescribed for internal administration and 15 for external application or use. Water is the general medium for majority of the preparations (27); other often employed media are cow milk (9) and honey (3), _Zingiber officinale_ and _Ocimum tenuiflorum_ (5 preparations each) and _Curcuma longa_ (4 preparations) are the most commonly used species in pre, postnatal and child healthcare in Kerala.

No remarkable differences in employment of these medicines in prenatal, postnatal and child healthcare could be observed with respect to religion, geographical location and rural, suburban or urban habitats in Kerala though urban people now a days rely more on _Ayurveda_ and/or allopathy, for their natal care treatments.

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Information contained in this paper were gathered from 88 women including 12 birth attendants from 40 villages spread over the length and breadth of all the 14 districts of Kerala. We acknowledge their kindness and willingness in parting with the knowledge.

References