

The lesser-known medicine *Ka Dawai Niangsohpet* of the *Khasis* in Meghalaya, Northeast India

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The paper aims at focusing light on the hidden indigenous knowledge of traditional medicines of the *Khasis* in Meghalaya. There is an age-old belief of the *Khasis* in a type of germ that infects the infants and newborns known as *U Niangsohpet* (*Niang* means germs and *sohpet* means the navel in *Khasi* dialect) and in administering of the herbal medicine *Ka Dawai Niangsohpet* to eliminate the germs from the body. The information presented in the paper is collected through direct field interviews with the indigenous herbal practitioners, observation of the patients to see the effectiveness of the herbal medicine, recording the testimony received from the parents whose children have been fully cured and also highlighting the view of the allopathic doctors on this matter. *Niangsohpet* is a form of infantile diarrhoea or irregular bowels and yellowness of the conjunctiva and skin during infancy known as neonatal jaundice. This herbal medicine *Ka Dawai Niangsohpet* may prove effective in reducing infant mortality.

Keywords: Ethnomedicine, Herbal medicine, *Khasis*, Meghalaya

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Meghalaya, situated in the Northeastern part of India, lies between 25°05' N and 26°10' N Latitudes and 89°47' E and 92°47' E Longitudes. Meghalaya has a total area of 22,429 sq km and is the home of three major tribes, viz. the *Khasis*, *Jaintias* and *Garos* although other tribes like the *Bodo*, *Hajong*, *Rabha*, *Koch*, *Miri*, etc. are also present in some pockets. The *Khasis*, *Jaintias* and *Garos* of Meghalaya to a great extent still hold on to their traditional faith in local medicine men and wild herbal plants because of availability of diverse forest cover. Interestingly, in some cases, prayers to the almighty or chanting of *mantras* sometimes accompany administering of the herbal medications. Therefore, it is interesting to record the traditional wisdom about plant wealth of their surroundings though there is a steady decline in human expertise capable of recognizing various medicinal plants. Studies on plants of ethnobiological value are important for evaluating human-plant relationships and for understanding the regional human ecology relations to their environment¹. Ethnobotanical studies of the *Khasis* and *Jaintia* tribes of Meghalaya have been reported²⁻⁴. Some researchers have documented a total of 577 species of plants

belonging to 375 genera under 146 families used by the *Hynniewtreps* of Meghalaya as edibles, plant masticatories, ethnoiatrical plants etc. while others have recorded 45 ethnomedicinal plants used by the *Khasi* tribe of Cachar district, Assam^{5,6}.

Methodology

An ethnobotanical study in the East and West Khasi Hills and Ri Bhoi districts of Meghalaya was conducted during 2005-2006. Open ended, semi structured and structured interviews were conducted with the traditional healers or locally known *Nong ai dawai kynbat*, who prescribes herbal remedies to a number of ailments including *a Dawai Niangsohpet*. Interviews with a number of elderly women folks who have a great deal of experience in indigenous herbal treatment were also conducted (Fig.1). Most importantly, testimony of the claims given by the parents whose children have been cured by the medicine men was recorded. Frequent field visits were undertaken with the informants and specimens of species were collected for the purpose. Identification was done with the help of National, regional and state flora and consultation with Herbarium of the Botanical Survey of India, Eastern Circle, Herbarium of Botany Department, North

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Eastern Hill University (NEHU), Shillong⁷. Though theoretically, all ethnobotanical claims are taken as equally reliable, reliability of every claim cannot be of the same degree. In an attempt to fill this lacuna, Relative Reliability Index was used to express the reliability of Ethnobotanical data as a single numerical value. To calculate Relative Reliability Index (RRI), every claim/information is assigned a value ranging from 01-04 in each of the five sets of criteria listed as A, B, C, D, and E. Value of RRI varies from 0.69 (lowest reliability) to 1.1(highest reliability)⁸.

Results and discussion

Each and every *Khasi* parent whether young or old, rich or poor believe in the presence of what is known locally as *Ñiangsohpet* in their newly born babies be it girl or boy. However, there is no literature or folklore known of the *Khasi* tribe which documents the origin of this belief. From frequent interviews and contacts with the elder folks and medicine men of many villages, some information about this belief has been gathered, which may be true but not complete. It is believed that *Ñiangsohpet* are germs, which reside in the skin of the stomach or may be intestines of newly born babies and disturb the digestion processes. When the digestion of the food taken by the baby is disturbed, it is believed that the baby gets dysentery and all types of stomach problems, which eventually weakens the body and make them susceptible to various kinds of diseases like chronic cold, fever, constipation, and appetite loss. If the medicine is not administered at an infant stage then as the child grows up the germs multiply inside the body and give rise to various health disorders especially related to the digestive tract.

The germs may be of two types, *Ñiang iong* (black germs) which are more in numbers and the treatment takes a longer time at least one year or more, and *Ñiang saw* (red germs) which are less in numbers and if treated properly can be eliminated from the body within 6 months. The less prominent ones are *Ñiang stem* (yellow germs) and *Ñiang tamar* (colour unspecified). The presence of the germs can be felt and the type of germs confirmed by touching or feeling the stomach of the babies. Others confirm their presence by looking at the nail of the thumb of the baby or by pressing the nail of the thumb with the petiole of *Piper betle* L. (Piperaceae) or with a small piece of *Zingiber officinalis* Rosc., (Zingiberaceae).

The germs it is believed have come to reside in the stomach of the baby, right from the time it was still in the mother's womb. This was due to the various foodstuffs consumed by the expectant mother. Due to this, advice was sometimes given to the mother to avoid taking *Lycopersicon esculentum* Mill. (Solanaceae), *Solanum melongena* L. (Solanaceae), *Sechium edule* (Jacq.) Sw. (Cucurbitaceae), and *Tungrymbai*, a local chutney prepared from fermented beans of *Glycine soja* Siebold & Zucc. (Papilionaceae) during the gestation period.

While some elders and local practitioners are of the opinion that it is not due to the presence of germs but is due to some waste products (known locally as *ka eit 'iawbei*), accumulated in the stomach of the baby during the gestation period. Few of them also believe that the germs reside in the veins and they are of only one type and colourless. The herbal medicine, locally known as *Ka Dawai Ñiangsohpet*, kills the germs and eliminates them out of the body. Right from the olden days, the people have been administering the medicine to their young ones. This medicine is not prepared individually at home but by some local traditional healers who prepare the medicine from various herbs and sell it to the people. In olden days, mostly female members from the royal families practiced the preparation and the sale of the medicine but now it is seen that the local practitioners are also preparing the medicine. Different medicine men use different types of herbs and follow their own formulation and dose. The medicine given orally is also applied on the stomach when the baby is only two weeks old and continued till 1-2 yrs of age till the body is free of these germs. It is believed that feeding the baby with mashed banana soon after birth helps to eliminate the germs at a lesser time. The medicine is sometimes mixed with the mashed banana or rice and fed to the baby. Plants used for the preparation of medicine are enumerated as follows:

Acorus calamus L., (Araceae), Bet/Ryniaw

Parts used: Leaves and rhizome (Fig.2).

Ageratina riparia (Regel) R. M. King. & Rob. (Asteraceae), Kynbat jewslew

Parts used: Whole plant.

Asparagus racemosus Willd., (Asparagaceae), Shiah jaker

Parts used: Leaves and rhizome.

Asparagus filicinus Buch.-Ham. (Asparagaceae), Sohpen khlaw

Parts used: Leaves and rhizome.

- Cassia fistula* L., (Ceasalpinaceae), Dieng laroo
Parts used: Fruits (pulp) (Fig.3).
- Cephalostachyum latifolium* Munro (Poaceae), Sylli
Parts used: Stem.
- Curcuma montana* Roxb. (Zingiberaceae),
Kynshiang/Syingshmoh kynthei
Parts used: Rhizome (Fig.4).
- Curcuma aeruginosa* Roxb., (Zingiberaceae), Shyrm
iong
Parts used: Rhizome.
- Cyclea bicristata* (Griff.) Diels. (Menispermaceae),
Batpyllon
Parts used: Leaves and rhizome.
- Melastoma malabathricum* L. (Melastomataceae),
Krah ryngai
Parts used: Root.
- Osbeckia crinita* Benth. (Melastomataceae), Dieng
Sohphyrno/dieng lakum/kynbat tukhra
Parts used: Whole plant (Fig.5).
- Rubia cordifolia* L. (Rubiaceae), Jyrmisaw/Kynbat
thar/Mei rihoi (Fig.6).
Parts used: Leaves.
- Rubus ellipticus* Sm., (Rosaceae), Sohshiah/Sohprew
Parts used: Root
- Schima wallichii* (DC.) Korth. (Theaceae), Dieng
ngan
Parts used: Stem.
- Smilax ferox* Kunth, (Smilacaceae), Shiah krot
Parts used: Root.
- Symplocos laurina* (Retz.) Wall.ex Rehd. & Wils.
(Symplocaceae), Dieng Sohkei
Parts used: Leaves.
- Ternstroemia gymnanthera* (W&A) Bedd.,
(Ternstroemiaceae), Jyrmi Niangsohpet
Parts used: Stem bark.
- Viscum articulatum* Burm.f., (Loranthaceae),
Mangkaring
Parts used: Whole plant (Fig.7).
- Zingiber rubens* Roxb. (Zingiberaceae), Sying mak
hri
Parts used: Rhizome (Fig.10).
- Zingiber montanum* (K. D. Koenig) Link ex Dietr.
(Zingiberaceae), Sying Blei/Syng shmoh shynrang.
Parts used: Rhizome (Fig.9).

Different types of formulation for the medicine as given by the local practitioners. Stem bark of *Ternstroemia gymnanthera* (W&A) Bedd is boiled in water till the water turns red, then the black pulp of *Cassia fistula* L. (seeds are discarded) together with small pieces of rhizome of *Zingiber rubens* (L.) Sm. is added to the solution. 1- 2 teaspoonfuls twice a day is

given to infants. 10 - 15 pods of *C. fistula* L. can be used for 5 bottles (500 ml each) of medicine. Stem bark of *Ternstroemia gymnanthera* (W&A) Bedd. and small pieces of a root boiled in water for 2 hrs; when cooled the medicine is given to infants. Whole plant of *Viscum articulatum* Burm.f. together with root of *Smilax ferox* Kunth. is boiled with water in an aluminum pot until the color of the solution turns like red tea (Fig.8). When cooled, the solution is poured in clean aluminum pots (Fig.11) and again poured in bottles of 500ml capacity. To each bottle two or three small pieces of *Zingiber zerumbet* (L.) Smith. is put and a small amount of smoked dried, powdered bark of a root is poured (Fig.12). The bottle is shaken properly to mix the contents and the medicine is ready. It is given to newborns and also applied over the stomach. At least 1 teaspoonful of the same juice is also given daily to lactating mothers and they are advised to avoid egg, pork and *tungrymbai* (local *chutney*). It was told that *Viscum articulatum* Burm, *Smilax ferox* Kunth and *Zingiber zerumbet* (L.) Smith keeps the baby warm, reduces gripping pain of the stomach while the bark of the root stops dysentery.

Root of *Smilax ferox* Kunth, *Melastoma malabathricum* L. together and *Rubus ellipticus* Sm. Along with *Osbeckia crinita* Benth. leaves are boiled for 2-3 hrs. When cooled, the medicine is given to infants. Roots and leaves of *Acorus calamus* L. are boiled in water with rhizome of *Curcuma aeruginosa* Roxb., *Curcuma montana* Roxb. and *Zingiber montanum* (K.D. Koenig) Link ex Dietr. About 1-2 teaspoonful of the cooled juice is given to infants and the expectant mothers. The stem of *Rubia cordifolia* is boiled in water and when cooled pieces of *Zingiber rubens* (L.) Sm. are kept; the medicine is ready for use. Powdered stem or root of *Rubia cordifolia*, stem of *Symplocos laurina* (Retz.) Wall. ex Rehd. & Wils., *Schima wallichii* (DC.) Korth. and *Cephalostachyum latifolium* Munro. is boiled and given. Roots and leaves of *Acorus calamus* L. with pieces of *Zingiber rubens* (L.) Sm. are boiled in water; and administered when cooled. Whole plant of *Ageratina riparia* is boiled and the juice is given.

Conclusion

Of 10 local traditional healers interviewed for the study and out of 100 patients interviewed, 70 patients come with their children for the treatment of *U Niangsohpet*, which accounts for about 70% of the patients who come for consultation. It is also seen that



Fig.1 A local healer



Fig.2 *Acorus calamus*



Fig.3 *Cassia fistula* fruits



Fig.4 *Curcuma montana*



Fig.5 *Osbeckia crinita*



Fig.6 *Rubia cordifolia*



Fig.7 *Viscum articulatum*



Fig.8 *V. articulatum* & *S. ferox* is boiled



Fig.9 *Zingiber montana*



Fig.10 *Zingiber rubens*



Fig.11 Solution is poured in clean pots



Fig.12 Measuring of utensils for use

Table 1— Relative Reliability Index (Khan, 2001)

Plant name	vA	vB	vC	vD	vE	Total	RRI
<i>Acorus calamus</i>	03	02	02	02	02	11	1.0
<i>Ageratina riparia</i>	03	02	02	02	02	11	1.04
<i>Asparagus racemosus</i>	03	02	02	02	02	11	1.04
<i>Asparagus filicinus</i>	03	02	02	02	02	11	1.04
<i>Cassia fistula</i>	02	02	02	02	02	10	1.0
<i>Cephalostachyum latifolium</i>	01	02	02	02	02	09	0.95
<i>Curcuma montana</i>	03	02	02	02	02	11	1.04
<i>Curcuma aeruginosa</i>	03	02	02	02	02	11	1.0
<i>Cyclea bicristata</i>	01	01	02	02	02	08	0.9
<i>Melastoma malabathricum</i>	04	02	02	02	02	12	1.1
<i>Osbeckia crinita</i>	03	02	02	02	02	11	1.04
<i>Rubia cordifolia</i>	02	02	02	02	02	10	1
<i>Rubus ellipticus</i>	03	02	02	02	02	11	1.0
<i>Schima wallichii</i>	01	01	02	02	02	08	0.9
<i>Smilax ferox</i>	04	02	02	02	02	12	1.1
<i>Symplocos laurina</i>	02	01	02	02	02	09	0.95
<i>Ternstroemia gymnanthera</i>	03	02	02	02	02	11	1.0
<i>Viscum articulatum</i>	04	02	02	02	02	12	1.1
<i>Zingiber montanum</i>	03	02	02	02	02	11	1.04
<i>Zingiber rubens</i>	04	02	02	02	02	12	1.07

not only locals come to consult but also people from other states, like Assam, Nagaland, etc. do come to consult. Altogether, 20 plant species belonging to 8 families have been found essential for the preparation of the medicine. *Melastoma malabathricum* L., *Smilax ferox* Kunth., *Viscum articulatum* Burm.f., have the highest reliability of 1.1 (Table1). Pharmacological studies and clinical trials are the ultimate tests to judge the veracity of an ethnobotanical claim. Many more plant species are being used for the preparation of this medicine but the secretiveness of the medicinal practitioners and fear of over exploitation of the plant resources by the people outside their communities pose a hindrance in gathering all the information which is still hidden with them. As per the allopathic medicinal practitioners, what *Khasis* call as *Ñiangsohpet* is a form of infantile diarrhoea or irregular bowels and yellowness of the conjunctiva and skin during infancy known is neonatal jaundice. So, if proper

initiative is taken by the pharmacologists to work out, isolate, identify the active principles present in these herbs and scientifically prove the effectiveness of the medicine, *Dawai Ñiangsohpet* can be marketed as a new drug and the parents can administer this medicine to their infants to help reduce infant mortality rate due to Infantile diarrhoea and neonatal jaundice.

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