MEDICINAL PLANT USED FOR THE TREATMENT OF MUSCULAR SPRAIN BY THE TANGKHUL TRIBE OF UKHRUL DISTRICT, MANIPUR, INDIA

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Abstract

Ukhrul district of Manipur is a hilly region predominantly inhabited by the Tangkhul tribe. The Tangkhul people of this hilly region are mainly dependent on the forest and are quite familiar with local herbs found in the village surroundings and forest areas not only for their food but also provide a major part of the medicine for the treatment of various diseases and ailments especially for the poor people living in the district. Recent ethnomedicinal survey (2016 – 2017) among the Tangkhul community revealed the use of 35 species of angiosperms, covering 34 genera and 25 families which they use to treat muscular sprain. The present study was carried out through structured questionnaires in consultations with the elders and Tangkhul practitioners. Some significant medicinal plants which are used by the Tangkhul tribe for the treatment of muscular sprain are Argyreia nervosa, Cyperus rotundus, Equisetum ramosissinum, Homskioldia sanguine, Mikania cordata, Xylosma longifolia, etc. Plantation of medicinal plant species in home gardens and farm areas has shown its commercial potential and steps for conserving economically significant diverse plants of this hilly region.

Introduction:

Ukhrul, the homeland of Tangkhul/Naga tribe lies between 23˚13’N and 25˚68’ N Latitudes and 94˚20′E and 94˚25′ E Longitudes, having an area of 4,544 km2 of which 2,600 km2 area is forest covered. It is a hilly region, surrounded by Myanmar in the east, Nagaland state in the north, Chandel and Senapati districts of Manipur in the south and west respectively. The region enjoys tropical, sub-tropical and temperate climate. The temperate climate of the district is health promoting with a minimum and maximum degree of 30°C to 33°C. As per 2011 census, total population of Ukhrul district is 1, 83,115 (Anonymous 2011). The whole district is divided into five sub-division or blocks. They are Ukhrul, Chingai, Kamjong, Phungyar and Kasom khullen. Agriculture is the mainstay of the people of Ukhrul district, Manipur. Ukhrul is rich in floral diversity, most of which possesses medicinal properties. The Tangkhul’s are familiar with local herbs found in the village surroundings and forest areas, and thus this local herbs provide a major part of the medicine for the treatment of various diseases and ailments especially for the poor people living in the district. They are largely dependent on their traditional healing system for their healthcare and the information is passed on from generation to generation through the word of mouth. This paper is an outcome of an attempt to collect and document information about ethnomedicinal plant species used in muscular sprain by the Tangkhul community.

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Significant contribution has been made by some workers on various aspect of ethnobotanical and ethnomedicinal plants in Manipur state (Sinha 1987, 1990; Singh, 1991; Jamir, 1990, 1991; Singh and Singh, 1996; Singh et al., 2003; Khan, 2005; Salam et al 2009; Peihong et al 2016; Mohamad et al 2019; Robert et al 2019).

Methodology:
Field survey was conducted during 2016-2017 in several villages in Ukhrul district, Manipur, with the objective of gathering information about the medicinal plants that are traditionally used by the Tangkhul healers for the treatment of muscular sprain. Ethnobotanical data were collected using semi-structure questionnaire, interviews and discussion in their local dialect. Information regarding vernacular name, plant parts used and methods of preparation were also documented by interacting with them as well as through direct observations. Based on the information provided by local healers plant specimens were collected, and their classification and identification were done by referring to various literatures (Bentham & Hooker, 1862-83; Deb, 1961a,1961b; Jain & Rao 1977; Kanjila et al., 1934-1940; Parab and Reddy (2002) etc. For the correct nomenclature and family delimitation www.the plantlist.org has been consulted for all the recorded plants. Herbarium specimens were prepared and have been deposited in the herbarium of the Department of Botany, Nagaland University Headquarters, Lumami and in the Life Sciences Department of Manipur University, Manipur.

Result:

Table: Ethnomedicinal plants used in muscular sprain by the TangkhulNaga tribe of Ukhrul District of Manipur.

| SL. NO. | Name of Plants | Families | Vernacular Name | Parts Used | Mode of Uses |
|---------|----------------|----------|-----------------|------------|--------------|
| 1.      | Argyreia nervosa (Burm.f.)Boj. | Convolvulaceae | Pudinguri | Leaf | Paste |
| 2.      | Artemisia maritime L. | Asteraceae | Maharua | Leaf | Paste |
| 3.      | Calotropis gigantean (L.) W.T. Aiton | Asclepiadaceae | Ankot | Root | Boiled extract |
| 4.      | Cannabis sativum L. | Cannabinaceae | Ganja | Leaf | Steam |
| 5.      | Canthium variflorum Lam. | Rubiaceae | Lam-heibi | Leaf | Boiled |
| 6.      | Caryota urens L. | Aricaceae | Nongkhal | Leaf | Paste |
| 7.      | Callicarpa arborea Roxb | Verbenaceae | Chicothing | Leaf | Smashed or rubbed |
| 8.      | Clerodendrum indicum (L.) Kuntze | Verbenaceae | Chariotong | Leaf | Paste |
| 9.      | Commelina benghalensis L. | Commelinaceae | Wangdemkhoibi | Whole plant | Paste |
| 10.     | Conyza bonariensis (L.) Cron. | Asteraceae | Arirong- | Leaf | Paste |
| 11.     | Curcuma aromatica Salisb. | Zingiberaceae | Yaigang | Whole plant | Paste |
| 12.     | Cuscuta reflexa Roxb. | Cuscutaceae | Sangrei | Whole plant | Fresh extract |
| 13.     | Cyperus rotundus L. | Cyperaceae | kaho | Root | Paste |
| 14.     | Datura stramonium L. | Solanaceae | Sagolhidak | Leaf | Paste |
| 15.     | Dioscorea bulbifera L. | Dioscoreaceae | Lam Hapai | Leaf | Boiled warm leaf |
| 16.     | Dioscorea pentaphylla L. | Dioscoreaceae | Ok Hapai | Leaf | Boiled warm leaf |
| 17.     | Eryngium foetidum L. | Apiaceae | Lam sachikom | Leaf | Fresh extract |
| 18.     | Escholtzia blanda Benth. | Lamiaceae | Ngarikna | Whole plant | Fresh extract |
| 19.     | Equisetum ramosissimum Desf. Subsp. debile (Roxb.) Hauke. | Equisetaceae | Lai-utong | Whole plant | Paste |
| 20.     | Garcinia pedunculata Roxb. | Clusiaceae | Changneira | Fruit | Paste |
| 21.     | Homskioildia sanguine Retz. | Verbenaceae | Kharamleishok | Leaf | Boiled extract |
| 22.     | Houttuynia cordata Thunb. | Saururaceae | Ngayung | Leaf | Fresh extract |
Discussion:
In the present study, a total of 35 plant species belonging to 34 genera and 25 families was collected and recorded for its medicinal values that are used for treating muscular sprain. Different parts of medicinal plant Viz., root, stem, leaf, fruit, seed, rhizome were used as source of medicine by the ‘Khanong’ (Local healers) of this community. Most of the remedies were obtained from the leaves followed by root, whole plant, bark etc. The plant parts are commonly used as external applicants in the form of paste (prepared by grinding the plant material) and juice extracted from fresh plant material. Most of the remedies used for curing muscular sprain were derived from a single plant. Among the plant Eryngium foetidum, Mikania cordata, Ocimum americanum, Cyperus rotundus, Tagetes patula are commonly used by the Tangkhul healers. Moreover, it was noticed that the same plant species were also used for the treatment of many diseases other than muscular sprain by the Tangkhul healers. This study shows that knowledge and usage of herbal medicine for the treatment of muscular sprain among the Tangkhul people still play an important role in the life of this community since they are inexpensive, easy to use, and they have limited side effects compared to modern medicines.

Also, it is clearly evident from the study that the knowledge of plants and its usage is limited to elderly Khanongs. However, with advancement of medical sciences, urbanization, modernization, the younger generation is not interested and do not appreciate the importance of conservation of traditional knowledge as well as their tendency to migrate to cities to discard their traditional life style, there is a high risk of losing this wealth of knowledge as the traditional culture is disappearing. Hence, the author(s) stresses upon the urgent need of conservation and protection of the medicinal plants from the region.

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