



Ethnobotanical Study of Certain Medicinal Plants for treatment of Piles of Betbari area in Sivasagar District of Assam, India

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Abstract

The study of folklore medicinal plant was carried out along with various ethnic communities as Ahom, Adibashi, Bhunya, Brahmin, Kakoti, Kaibartta, Sonuwal Kashari etc. of Betbari area in Sivasagar district of Assam. In the present study, a total number of 12 plants belonging to 11 families were included for treatment of piles. In this assertion, the information was collected through questionnaire and personal interview among the village head (Gaon burah), traditional healers and old age people. Leaf, root, branch, rhizome, whole plant etc. are used by traditional healers for the preparation of folklore or herbal medicine. Leaf is found more frequently used than other parts of the plant. Compositae is the most dominant family containing 2 species whereas rest of other families are monospecific. Majority of folklore medicine were made in the form of juice. The phytochemical investigation of these plants are to be necessary for the preparation of drugs. Therefore, it is an urgent need to preserve ethnobotanical information before they get extinct and continuous efforts should be made to collect the information which will provide opportunity for future generation.

Keywords: Ethnobotany, Medicinal plants, Piles, Betbari, Sivasagar, Assam.

Introduction

Traditional or folklore knowledge of medicinal plants plays an important role for primary health care system in the developing world¹. Still today, plants are to be a major source of drugs in modern as well as traditional systems of medicine throughout the world. Therefore, the study of ethnomedicine and its restoration are usually necessary. According to World Health Organization (WHO) as many as 80 % of the rural population in developing countries relies on traditional or folklore medicine for their primary health care needs. India have rich tradition, culture, and natural biodiversity. Most of the tribals and non-tribals in India still depend on herbal medicine for treatment of various disease/ ailments.

Traditional healers provide considerable information about medicinal value of different plants. Therefore, medicinal plants constitute processes resource for mankind. In India, it is reported that traditional healers use 2500 plant species and 100 species of plants that serve as regular source of medicine²⁻³.

Assam is a gateway of North-East India and having rich biodiversity of herbal medicinal plants⁴. There are large number of tribal and ethnic communities in Assam and they depend on medicinal plant resources which are used as folklore or traditional herbal medicine for treatment of various diseases/ailments since time immemorial. Amongst them, the folklore or traditional knowledge and mode of utilization of medicinal plants is an important part for their primary health care system. However, recently it seems that knowledge of

folklore medicine are declining in modern society due to lack of interest of younger generations. Therefore, it is our primary need to preserve the knowledge of folklore medicine or ethno medicine through written records and proper scientific way. In this context, several workers⁵⁻⁹ have been reported on the ethno-medicinal studies of different plant species from time to time apart from India and several others¹⁰⁻¹⁷ from North-East India. Some authors¹⁸⁻²⁰ have also been reported ethnomedicinal studies of certain plants particularly piles disease. Hence, the present study to document folklore medicinal plants for treatment of piles used by local communities of Betbari area in Sivasagar District of Assam as very little studies have been made so far.

Materials and Methods

Study area: Betbari is a tehsil under the Sivasagar Sub-division of Sivasagar District of Assam. It is situated about 4 km away from Sivasagar town. Sivasagar district is situated at Upper Brahmaputra Valley of Assam and lies between 25°45' to 27°15' North latitude and 94°25' to 95°25' East longitude. Betbari is a plain area covering approximately 95 sq km. The two small rivers Disang and Dorika flow in the western part of Betbari. The maximum and minimum temperature is 15°C and 35°C. Average annual rainfall is 108.44 cm. The study area is floristically rich and local communities are generally depending on medicinal plants for preparation of folklore medicine. Local inhabitants of the study area are such as Ahom, Adibashi, Bhunya, Brahmin, Kakoti, Koibartta, Sonuwal Kashari etc. and among these communities, approximate 65% population of the

study area are Ahom community. These ethnic communities have their own traditional knowledge on herbal medicine which are inherited from their forefather.

Methods: The ethno-medicinal survey was carried out during 2012 of Betbari area in Sivasagar district of Assam. During the field trips, the ethnobotanical information was collected from local traditional healers and old age people belonging to different communities using semi-structured questionnaire and personal interview. The information about the practice of ethnomedicine or folklore medicine was recorded in accordance to their local name, plant parts, method of preparation and administration for the treatment of piles. The routine method²¹ have been followed for collection of plants species and herbarium technique in the present study. During the field work, the plant specimen were collected from its natural habitats and identified with the help of regional flora²²⁻²³.

Results and Discussion

The plants species are arranged in alphabetical order of their Scientific name, English name, local name (in Assamese), part use, method of preparation, administration which are enumerated as below:

Agle marmelos Correa ex Roxb [Rutaceae; Beal tree; Bel]- One fruit of Agle marmelos, 200 gm Murraya koeningii, 7 nos buds of *Leucas aspera*, 21 nos of *Elettaria cardamomum* are grinded and mixed with 200 ml Got milk and boiled the mixer for few minutes and to keep for cold. One dose once daily in empty stomach before breakfast for 3 days only.

Amorphophallus paeoniifolius (Dennst) Nicolson [Araceae, Elephant foot yam; Ulkosu] -Approximate 60-70 gm shoots of *Amorphophallus paeoniifolius* are boiled with few amounts of leaves of *Tamarindus indica* in 500 ml of water. One dose once daily in empty stomach for 21 days only.

Bryophyllum pinnatum Kurz [Crassulaceae; Air plant; Dupor tenga]- Approximate 7-9 nos leaf of *Bryophyllum pinnatum* are grinded and juice is extracted and mixed with one teaspoonful juice of Citrus canker (*Gulnemu*). One dose thrice daily in empty stomach before breakfast for 3 days only.

Curcuma longa L. [Zingiberaceae; Turmeric; Halodhi]- Approx 15-16 nos rhizome of *Curcuma longa* and few amount of sugar candy are grinded with 25 gm rice and juice is extracted. One dose once daily in empty stomach before breakfast for 3 days only.

Eclipta alba L. Hassk [Compositae; False Daisy; Kehraj]- Approximate few amount of leaves of *Eclipta alba* are grinded and molasses make paste. The paste should be taken twice daily after meal for 3-4 days only.

Lageneria vulgaris Ser [Cucurbitaceae; Bottle gourd; Jati lawo]- Approximate few amounts of flowers of *Lageneria vulgaris* are grinded and juice is extracted. Three tea spoonful juice is mixed with few amounts of sugar candy and three dose thrice daily in empty stomach until for cure of piles.

Leucus aspera (Willd) L.[Labiatae; Thumbi; Drun bon]- Approximate 21-23 nos root of *Leucas aspera*, 9-10 nos hair root of *Pteris longifolia* are grinded and juice is extracted and mixed with cow milk. One dose once daily in empty stomach before breakfast for 3-4 days only.

Moringa Oleifera Lam. [Moringaceae, Horseradish, Sojina]- Few amounts of leaves of *Moringa Oleifera* are grinded and juice is extracted. One dose is applied twice daily over the affected portion for 6-7 days only.

Musa balbisiana Colla [Musaceae, Bhim kol]- Root of *Musa balbisiana* washed thoroughly with water and latex is extracted. Approximate 4-5 teaspoonful latex are used once daily early in stomach for 3-4 days only.

Oxalis corniculata L.[Oxalidaceae, Indian sorrel; Tengesi tenga]- Few amounts of whole plant of *Oxalis corniculata*, soft bud part of Sugarcane, few amounts of *Centella asiatica* and three heads of Earth worm are grinded and juice is extracted. One dose once daily in empty stomach for 3 days only.

Paderia foetida L. [Rubiaceae; Chinese flower; Bhedai lota]- Few amounts of tender leaves and leaf buds are cooked with daily food items until to cure of piles.

Tagetis patula L. [Compositae; Marigold; Nazirphul]- Approximate 5 nos apical bud of *Tagetis patula* are grinded and juice is extracted and mixed with few ml of water. One dose twice daily before breakfast for 3-4 days only.

From the present investigation, it has been found that 12 plant species belonging to 11 families were enumerated above. Among them, 50% herbaceous, 25 % tree, 16.6 % shrubby and 8.3% are climbers. Compositae is the most dominant family containing 2 species whereas rest of other families like Crassulaceae, Gramineae, Rutaceae are mono-specific. Leaf is predominantly used as folklore medicine containing 3 species for treatment of piles as followed by rhizome (2 species), fruit, apical bud, root, leaves, whole plant and flower (1 species) of each. The growth form of the documented medicinal plant species and percentage composition of different plant parts used in ethno- medicine preparation and percentage of family of different plants used for Piles disease were presented in fig 1, 2 and 3 accordingly.

From the result, it was observed that traditional healers used parts of single plant or combination of two or more than two plants and cow milk, got milk, sugar -candy, water are also used as medium for preparation of ethno-medicine. The herbal

medicines were taken orally either before or after meal for 3-4 days only. The medicinal plants were usually collected from wild habitat, where there is need. For the administration and application, herbal medicine were taken in the form of juice and filtrate extract when consumed internally. The traditional healers generally prescribed herbal medicine to the patients to avoid the alcohol, oily, spicy, meat, and fish during the treatment period of piles. Most of the inhabitants of study area have use folklore medicine for treatment of piles than allopathic one. During the study, it was observed that the traditional

healers are hesitant to expose their ethno-medicinal knowledge because they have faith that when they expose their traditional knowledge on other person, their folklore medicine will not benefit for treatment of disease. In this regards, they maintain this secrecy among the society. It was observed that traditional system of medicine have been verbally transmitted from one generation to another and the elder people have more traditional knowledge than younger one because of, elder person have give importance and more experience on folklore medicine.

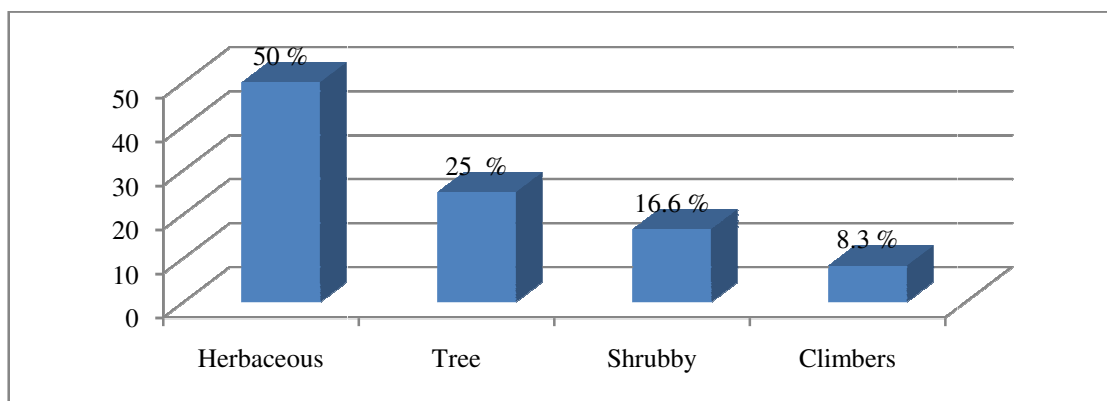


Figure-1
 Growth form of the documented medicinal plant species

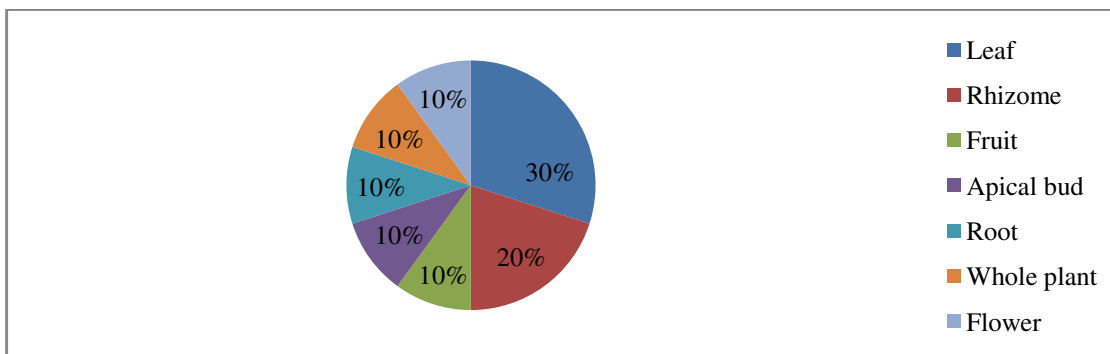


Figure-2
 Percentage composition of different plant parts used in ethno-medicine preparation

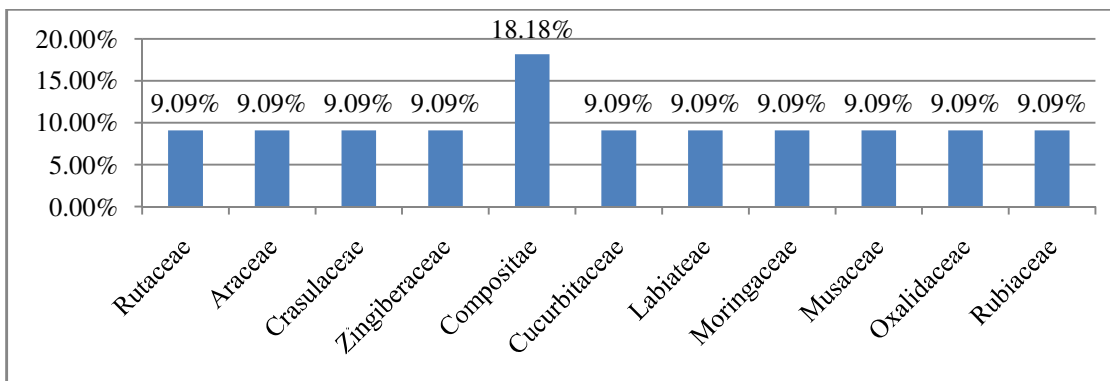


Figure-3
 Percentage of family of different plants used for Piles disease

Conclusion

From present study, it was found that a total number of 12 plants species were use by local communities of Betbari area in Sivasagar district of Assam for the treatment of piles. The study further reveals that the traditional healers or old age people are the main source of knowledge of folklore or traditional medicine and local inhabitant of the study area are usually depend upon the herbal medicinal plant resources for the treatment of piles. Now a days, the knowledge of folklore medicine are declining due to no written records and also lack of interest of younger generation of the study area. Therefore, there is an urgent need to kept the written records and awareness programme should be arranged for conservation of medicinal plant on sustainable uses among the tribals, non-tribals, general public and younger generation. Finally, the study concludes that analysis of phytochemical constituents of these medicinal plants for further study may be helpful in the preparation of modern drugs and medicine.

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