

Studies on prevalence of Malaria in Santhal and Paharias and their Folklore treatment in Pakur, Jharkhand

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ABSTRACT

A survey was conducted to know the folklore medicine used to cure malaria prevailing among the Santha and Paharias communities in Pakur District of Santhal Pargana, Jharkhand. A total of 20 plant species were reported to use either singly or in combination with other plants are reported to cure Malaria. These plants are distributed among 14 families and 17 genus.

Key words - Malaria, Folklore, Pakur, Santhal, Paharias.

INTRODUCTION

Since the time immemorial the human depends on the medicinal plants for the cure and its curative properties have been the main interest of the mankind. In recent days the use of medicinal plant has got more attention as because these plants are, cheaper, easily available and moreover have no side effect. As per the report of World Health Organization more than 80% population of the world depends on conventional systems of medicines for their primary health care needs. Due to rapid increasing of population, modern medicines could not able to fulfil the requirements, hence WHO recommended traditional form of medicine (WHO,1978&1993) Various scientist and traditional healers have suggested that plant based medicines are effective for prevention of Malaria and other ailments in several parts of the world (Sofowora, 2008,Symth 1994) etc. Malaria is a mosquito – borne infectious diseases of human and other animals and the causative agent is the genus of plasmodium. Malaria is a deadly disease which has a greater morbidity and mortality than any other infectious diseases of the world (Manzur et al. 1994).

Pakur district is tribal dominated district in Santhal Pargana Division of Jharkhand. This is a abode of Shanthal and Paharias. Santhals have strong believes in their traditional medicine that is the use of Medicinal herbs for the treatment of ailments. In this

region Malaria and Kala zar are two important disease which are common and prevailing in rural areas of this specially in Pakuria and Littipara. In the communication the plants used to cure malaria by the people of Pakur has been discussed.

Materials and Method

Study area

The district of Pakur came into existence in the year 1994. It is situated in the north east corner of Jharkhand State. It is located at 23° 40' to 25°18' latitude and 86° 25' to 87° 57' E. longitude. Pakur is the administrative headquarters of this district. It is situated on the north-eastern corner of Jharkhand state. The district is bounded on the north by Sahebganj district, on the south by Dumka district, on the west by Godda district, and on the east by the Murshidabad district of West Bengal. Pakur district consists of 06 Blocks. The following are the list of the Blocks in Pakur district- Pakur, Maheshpur, Hiranpur, Littipara, Amrapara, Pakuria. The district, with a population of 899,200 (census 2011), and covering an area of 686.21 km², this gives it a ranking of 465th in India (out of a total of 640). The district has a population density of 498 inhabitants per square kilometer (1,290/sq mi). Its population growth rate over the decade 2001-2011 was 28.15%. Pakur has a sex ratio of 985 females for every 1000 males, and a literacy rate of 50.17%. Bengali is the principal language spoken in Pakur district. Traditionally, Pakur

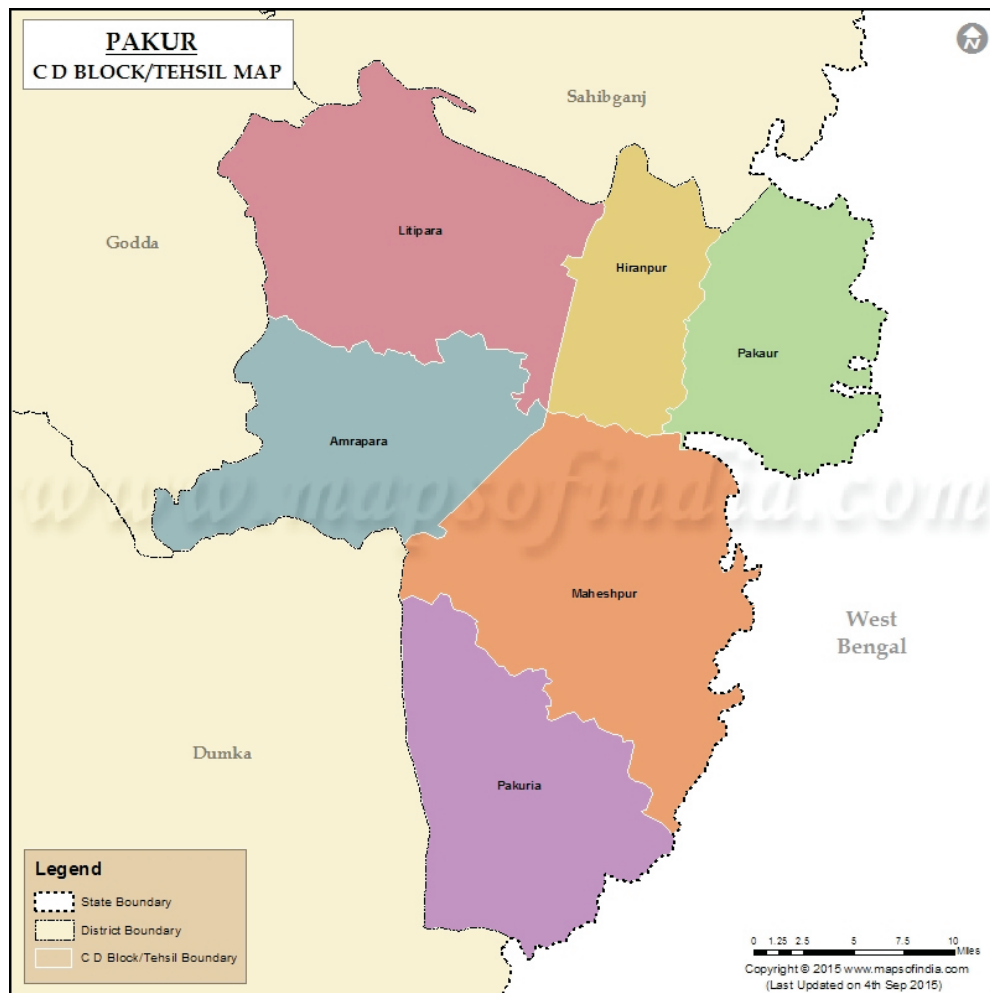
has been the land of Santhals and Mal Paharia Adivasi people. However, over a period of time, demographic composition has gradually changed and the local folks have come to the mainstream of the Indian society. In 2006 the Ministry of Panchayati Raj named Pakur one of the country's 250 most backward districts (out of a total of 640). It is famous across the world for its Black stone. It supplies nearly 500 Truck Stone chips daily to Bangladesh. It is generating the highest revenue for Howrah railway Division by supplying Black Stone Chips across India and Coal to Punjab.

Material and methods

A survey was conducted in the district of Pakur from

January 2020 to may 2020. Regular field trips were made to consult the traditional healers like Vaidyas, Kaviraj, elderly people as well as the patients concerned of the villages in different blocks of Pakur specially Pakuria and Littipara where the prevalence of Malaria is much more.

A semi structured questionnaire was prepared to know the plant species, their doses, duration, process of preparation, form of administration which was often used to cure malaria. The folklore information were gathered by the traditional healers in the following format of questionnaire.



Map of Pakur

Folklore Informations

1. Tehsil (Block) Of Pakur district -----
2. Locality -----
3. Serial No. ----- Date -----
4. Tribal Informer Name -----
5. Sex ----- Age -----
6. Clan ----- Status-----
7. Status of dependency on the forests, Fully----- Partially-----
8. Major Forest Produce -----
9. Edibles -----
10. Timbers -----
11. Woods used in tools making -----
12. Flowers -----
13. Medicines -----
14. Agriculture, Shifting or Settled? -----
15. Type of area under cultivation -----
16. Occupation other than Agriculture -----
17. Economic condition -----
18. Taboos, Totems -----
19. Sacred Grooves -----
20. Other conservational practices -----
21. Others -----

Performa having Informations from the Herbal Healers

1. Name -----
2. Age ----- Sex ----- Experience in Years -----
3. Speciality, If any? -----
4. Self Started Or Hierarchical -----
5. No. of such persons in the locality -----
6. Position they hold in the Society -----
7. Mode of treatment -----
8. Plants used in medicine -----
9. Local name/ Botanical Name/ Parts Used -----
10. Treatment of Ailments: -----

Review of Literature

Literature survey reveals that a number of worker has worked on the various aspects of anemia and the plants used in the treatment of Malaria. Important among them are Indian medicinal plants (Kirtikar, 1918) Glossary of Indian medicinal plants (Chopra, 1956) ,Traditional Vaidyas and tribal communities uses traditional medicine for malaria effectively in India(Sandip *et al.* 2016), Traditional medicines have been used to treat malaria for thousand of years(Willicox,2004), Anti malarial treatment : herbal medicine treatment a ray of hope(Kshipra *et al.* 2016), Medicinal plant useful for malaria therapy in Okeigbo, Ondo state , South west Nizeria (Chopra, 1956), Herbal plant used for the treatment of malaria (Tolu *et al.* 2007), some plants reported by the workers like *Acacia nilotica* Delile (Satish and Kale, 2013), *Adhatoda vasica* (Bora *et al.*, 2007) , *Amarantus spinosus* (Tolu *et al.* 2007) , *Andrographis paniculata* (satish and Kale,2013), *Azadirachta indica* (Pierre *et al.* 2011), *Boerhaavia diffusa* (Bora *et al.* 2007), *Cassia fistula* (Bahekar and Kale,2013), *Carica papaya* (Bora *et al.* 2007) , *Cassia occidentalis* (Bahekar and Kale,2013), *Carica papaya* (Bora *et al.* 2007), *Cassis tora* (Willicox,2004) , *Centella asiatica* (Pierre *et al.* 2011) , *Colocasia esculenta* (Prakash and Unnikrishnan, 2013), *Citrus limon* (Pierre *et al.* 2011), *Cyperus rotundus*(Marandi *et al.* 2015), *Nyctanthes arbor tristis* (Kabir *et al.* 2014) , *Tinospora cordifolia*(Sastri,2002) , *Vitex negundo* (Nagendrappa 2013).

Results and Discusssion

The present analysis includes the enumeration of 20 plant species belonging to 14 families of angiosperms distributed over 17 genus have been recorded to as medicinal herb to cure malaria. Out of these 20 plant species 19 species belongs to dicoteledons where as 1 species to monocot. As far as genera is concerned 16 genera belongs to dicoteledons where as 1 genera to monocot. Regarding family is concerned 13 families belong to dicoteledons and 1 family belongs

to monocot. Cassia is the largest genus with three species and next is Amaranthus with 2 species.Largest family is Ceacalpiniaceae with 4 genera and next is Acanthaceae with 2 genera and rest of the family have 1 genus each.A list of all the plant which are use to cure malaria has been tabulated in Table-II , a list of informant has also been furnished in Table-I.

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Table-1. LIST OF INFORMANTS

S.N.	Nmae	Address	Age	Experience
1	Sonamukhi Hembrom		45	8Yrs
2	Imanuel Murmu	Village-Todai Block –Hiranpur Dist-Pakur	40	7 Yrs
3	Michel Baski	Vill-Talpahari Block –Littipara Dist.-Pakur	60	20 Yrs
4	Lukhi Hembrom	Vill.-Karanghati Block –Littipara Dist.-Pakur	70	35 Yrs
5	Simon Malto	Vill.-Surajbera Block –Littipara Dist.-Pakur	36	5 Yrs
6	Kripalata Marandi	Vill. Saharkol Block and Dist. - Pakur	39	7 Yrs
7	Elena Soren	Vill-Amba Toli Block and Dist. - Pakur	35	4 Yrs
8	Jant Hemrom	Vill-Talpahari Block –Littipara Dist.-Pakur	45	10 Yrs

TABLE – II: Medicinal plants used to cure Malaria and Malaria like symptoms in Kolhan region of Jharkhand India.

Sl. No.	Botanical Name /Family	Local Name	Habit	Part used	Mode of use
01	<i>Acacia nilotica</i> (Fabaceae)	Babul	Small to Medium Tree	Leaf, flower, Pod	Leaves and Flower are mixed and boiled and inhaled by patient for three days.
01	<i>Adhatoda vasica</i> (Acanthaceae)	Basak	Shrub	Leaf	Decoction of leaves is consumed daily for a month

Sl. No.	Botanical Name /Family	Local Name	Habit	Part used	Mode of use
03	<i>Hygrophila auriculata</i> (Acanthaceae)	Kuile Khara	Herb	Leaf	The decoction of the leaf is consumed for a month. Sag of the leaf is prepared .
04	<i>Amarantus spinosus</i> (Amaranthaceae)	Sidh Kanta	Herb	Leaf	Used as SAG.
05	<i>Andrographis paniculata</i> (Acanthaceae)	Kalmegh	Herb	Shoot	The decoction of the leaves is given.
06	<i>Amaranthus viridis</i> (Amarantaceae)	Lal Sag	Herb	Leaf and stem	Used as SAG.
07	<i>Azadirachta indica</i> (Meliaceae)	Neem, Leem	Tree	Leaf	10g of leaf powder is mixed with 500ml of water and taken twice a day for three days.
08	<i>Bauhinia acuminata</i> (Caesalpiniaceae)	Kachnar	Shurb	Leaf	Decoction of leaves is given to patient also used as SAG.
09	<i>Boerhaavia diffusa</i> (Nyctaginaceae)	Punernava	Herb	Leaves and Shoot	Used as SAG.
10	<i>Cassia fistula</i> (Caesalpiniaceae)	Bandar lauri	Tree	Leaf	juice of leaves is Consumed.
11	<i>Cassia fistula</i> (Caesalpiniaceae)	Bada Chakor/ Junti Ara	Herb	Leaf	Dried powdered leaf mixed in sugar diluted in water and consumed.
12	<i>Cassia tora</i> (Caesalpiniaceae)	Chakor	Herb	Leaf	Used as SAG .
13	<i>Centella asiatica</i> (Apiaceae)	Thankuni	Herb	Shoot	Pea sized tablets of leaves are taken with warm water for five days (one tablets per day).

Sl. No.	Botanical Name /Family	Local Name	Habit	Part used	Mode of use
14	<i>Cicer arietinum</i> (Papilionaceae)	Chana, Boot	Herb	Leaf	5gm leaves powder is boiling with 200 ml of water and drunk early in the morning a week.
15	<i>Citrus lemon</i> (Rutaceae)	Nimbu	Shrub or small sized tree	Leaf	leaves boiled with water and sugar is consumed.
16	<i>Colocasia esculenta</i> (Araceae)	Kachhu	Herb	Leaf	Leaves use as SAG.
17	<i>Cyperus rotundus</i> (Cyperaceae)	Motha	Herb	Stem, Tuber	Stem and tuber in powdered form is consumed with water.
18	<i>Euphorbia hirta</i> (Euphorbiaceae)	Dudhi	Tree	Leaf	Used as SAG.
19	<i>Tinospora cordifolia</i> (Menispermaceae)	Hadjoda	Shurb	Leaf, Stem	Decoction of the stem is consumed.
20	<i>Vitex negundo</i> (Verbenaceae)	Sinduar	Shurb	Leaves and Shoot	Decoction of the stem is consumed.

Photographs of the Medicinal Plant Practitioners



Michel Baski



Immanuel Murmu



Lukhi Hembrom