



Traditional herbal medicines for

MALARIA

prevention

As malaria is one of the most deadly infectious diseases, the increasing resistance to modern anti-malarial drugs is alarming. Besides, poor people often cannot afford modern drugs, or lack access to them because of limited medical infrastructure. Therefore, traditional medicines could be an important resource in fighting malaria. This article discusses one experience in assessing and promoting plant-based formulations using locally available herbs for malaria prevention.



In rural India, modern medicine is only readily accessible to less than one-third of the population. Lack of adequate infrastructure and medical supplies, lack of doctors and required support staff, and long travelling distances to public health centres lead to further dissatisfaction of rural people. Traditional medicines on the other hand are affordable and accessible, as they are made from locally grown medicinal plants, harvested either from the wild or in home herbal gardens.

Traditional Indian medical knowledge is rooted in different 'health cultures'. There are codified traditions with a vast ancient medical literature as in the case of Ayurveda, and there are folk healers such as bone setters, birth attendants or poison healers, and general healers. Their knowledge is often transferred orally over generations. From the endogenous development perspective, it is important that these rich medical traditions are assessed and revitalised for their contribution to health problems in the 21st century.

Anti-malarial remedies

The Foundation for the Revitalisation of Local Health Traditions (FRLHT) has been involved in the Research Initiative on Traditional Anti-malarial Methods (RITAM) since 2001. RITAM is a group of international researchers working on traditional anti-malarials with more than 200 members from over 30 countries. A systematic literature review by RITAM indicates that numerous plant species are used to treat malaria or fever, eleven of them being found in three continents. Within the COMPAS programme, FRLHT

Malaria is the oldest recorded and one of the most infectious diseases in the world. The demographics of malaria show that 58% of malaria deaths occur in the poorest 20% of the population, killing 1-3 million people and causing disease in 300-500 million people annually worldwide. Resistance to anti-malarials is now one of the major problems in Western bio-medical management.

strengthens the field research component by assessing the effectiveness of anti-malarial remedies from folk traditions. Before assessing traditional medicine for malaria prevention through a community based approach, several preparatory steps were undertaken:

- ✦ Literature survey on plant drugs used for malaria management.
- ✦ Documentation of traditional anti-malarial remedies and dietary rules suggested by folk healers for malaria prevention.
- ✦ Compilation of pharmacological references for toxicology and efficacy of these practices from Ayurvedic and modern medical literature.

Community-based approach

In order to assess the effectiveness of traditional malaria preventive medicines at

participation. Publication of the local knowledge is done only with written permission of the folk healers.

In a *Kashaya* camp a decoction (*Kashaya*) made of herbs that is expected to prevent malaria is given to a selected group of volunteers for two days a week, in a period of three months during the monsoon season when malaria is predominant. These volunteers form the study group. In order to make a comparison with people not using the decoction, a control group is formed of volunteers with approximately similar characteristics.

In 2004, one *Kashaya* camp was held in Tiptur Taluka, Karnataka. A total of 147 volunteers were selected for the study group. The study that year was inconclusive due to the very low incidence of malaria in the study villages as well as the nearby villages. Although the study did not show specific effects on malaria, the medicine had a positive effect on the general well-being of the volunteers, such as improvement in appetite, bowel

Study shows that traditional malaria preventive practices are effective



field level, FRLHT conducted *Kashaya* camps. A *Kashaya* camp is a community-based participatory approach for assessing present-day relevance of traditional medical knowledge with full consent of the community members. The intellectual property rights of the folk healers' knowledge are protected as stated in the agreed study protocol. Informed consent is taken from participants before

movement and sleep and relief from frequent complaints such as general weakness, headache, muscle and joint pain.

In the next malaria season in 2005, *Kashaya* camps were conducted in four locations in Orissa and Andhra Pradesh. A survey population of 789 volunteers was formed, i.e. 399 volunteers in the study



Final processing of *Kashaya* (decoction) for malaria prevention.

group, 390 volunteers in the control group with complete baseline health data. Twenty-four malaria cases were reported during the camp period in the study group, and 113 in the control group. All the volunteers who were tested positive for malaria were immediately given conventional modern medical treatment. A general observation made during the programme was that in all the four places after the tenth camp week there was no incidence of malaria in the study group. The volunteers again reported good improvement of their general health.

From July 2006–February 2007 a clinical study was done in four villages in Orissa and Andhra Pradesh involving 483 volunteers: 239 in the study group and



Volunteers gathered together and taking *Kashaya*.

244 in the control group. Three malaria-positive cases were reported from the study group and 22 from the control group. The study, which was conducted to assess the efficacy of malaria preventive practices, showed statistically significant differences, proving that these decoctions were effective for malaria prevention. Although it is too early to be conclusive, the results suggest that volunteers in the study group receiving the decoction are less likely to get malaria than those in the control group receiving no decoction.

Conclusion

Despite substantial investments in research and eradication programmes, malaria continues to be a major public health problem in India and many other countries.

Interacting worldviews in malaria prevention

Spiritual

'Faults of the mind and non-righteous action lead to contamination of air-water-space-time'
Ancient Ayurvedic text.

Social

Enhanced social legitimacy of community and folk healers' knowledge.

Local knowledge is assessed through modern clinical research.

Material

Easily accessible, cost effective, self reliant solutions.

Local health traditions have immense potential for modern drug development.

Implementing traditional medical knowledge through community-based participatory approaches is feasible and is urgently needed in order to find solutions to the continuing high incidence of malaria in regions where it is endemic. Preliminary studies such as these underline the need for large-scale controlled studies to prove their efficacy. There is an urgent need for major research investments in this area to further develop appropriate solutions for mass application.



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For the FRLHT report on clinical study of malaria preventive practices (2007), please visit: www.frlht.org.in or www.gifts-ritam.org

| INCIDENCE OF MALARIA DURING TWO-YEAR <i>KASHAYA</i> CAMP STUDY | | |
|--|-----------------------------------|-------------------------------------|
| Study period | Malaria cases in study group | Malaria cases in control group |
| 2006/07 | 3 out of 239 volunteers 1.25% | 22 out of 244 volunteers 9% |
| 2005 | 24 out of 399 volunteers 6.01% | 113 out of 390 volunteers 28.97% |