

## INDIGENOUS PHYTOTHERAPY FOR FILARIASIS FROM ORISSA

R.D. GIRACH, M. BRAHMAM\*, M.K. MISRA \*\* AND M. AHMED  
Regional Research Institute of Unani Medicine, Bhadrak-756 100  
Regional Research Laboratory, Bhubanshwar \*  
Department of Botany, Berhampur University, Berhampur\*\*

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**Abstract:** *Filariasis is one major health problem in the coastal areas of Orissa including district Bhadrak. This article deals with 8 plant species used in native phytotherapy for filariasis in this region with the view to provide clue for further research.*

### INTRODUCTION

Bhadrak- one of the 30 districts of Orissa is situated on the east coast between 20° 43' – 21° 12' N latitude and 86° 16' - 86° 53' E longitudes, the district is largely inhabited by rural population and a few tribes, such as Bathudi, Bhumij, Kol Munda and Santals, they depend on plant resources for their daily needs, including health care.

Among the mosquito-borne diseases, filariasis is the major health problem in Orissa. According to an estimate, out of total population of 26.27 million in the state 18.24 million rural population is exposed to the risk of filariasis<sup>1</sup>. Diethyl carbamazine (DEC) is the only drug widely used so far for the prevention and treatment of filariasis in modern medicine, without much success<sup>2</sup>.

There is an urgent need to find out a suitable herbal drug for the treatment of filariasis. Concerted efforts have been going on both in modern and indigenous systems of medicine to come up with suitable remedy, which unfortunately remains elusive.

In the present study an attempt has been made to record herbal remedies used by

native inhabitants for prevention and treatment of filariasis.

### Materials and Methods

The data presented here are based on the larger ethnobotanical surveys conducted as part of "floristic and ethnobotanical studies of district, Bhadrak" by the senior author.

Firsthand information on medicinal uses of plants was collected from native health-practitioners and other knowledgeable persons of either sex in different localities of the district. The data was cross-checked from other groups or localities wherever possible.

The method for collection of plant samples and obtaining information on medicinal uses followed for the study was that of Jain<sup>3</sup>. Senior author is the collector. Voucher specimens are housed in unit herbarium of regional research institute of Unani medicine, Bhadrak.

Plant specimens are enumerated in the following Order: Botanical name, family in parenthesis, local name and locality followed by medicinal uses and voucher specimen number, surname of key informant

is given there after in bracket Data is supplemented with phytochemical and pharmacological reports form published literature.

## Results

### 1. *Andrographis paniculata* (Burm.F) wall, (Acanthaceae) Bhuinnimbo, Edtal.

Leaf juice mixed with honey (one teaspoonful, there daily) is advised to drink for about one month to subside oedematous swelling in filariasis. 4819 (singh).

Inhabitants of Godavari district in Andhra Pradesh use the plant extract in filaria<sup>4</sup>.

Plant contains andrographolide, kalmeghin, sitosterol glycosides, neoandrographolide, tannins and traces of volatile oil.<sup>5-6</sup>

Plant extract exhibited antipyretic<sup>7</sup> and anti inflammatory<sup>8</sup> activities.

### 2. *Caesalpinia bonduc* (L) Roxb, (Casalpiniaceae), Gil, Paliabindha.

A handful of seeds (without seed coat) boiled in sufficient cows' milk, washed repeatedly to remove its toxic effects, sun-dried and powdered drug (3-5 gm, two times daily) is given orally for three month to treat symptoms like filarial fever and selling, 3518 (panda).

Seeds contain bonducin, phytosterinin, saponins, phytoserols, caesalpin F, and bonducelline<sup>9</sup>.

### 3. *Ficus bengalensis* L., (moraceae): Baro: Kaupur.

Milky latex is directly applied on glandular swelling of lymph nodes and inflamed veins to subside swelling 4779 (Barik).

### 4. *Jatropha gossypifolia* L. (Euphorbiaceae); Koda jhahi, Padampur.

Leaf paste is applied locally to subside swellings. 737 (Nail) Plant exhibited antibacterial, and anti inflammatory activities<sup>10</sup>.

### 5. *Litsea glutinosa* (Lour) robins, (Lauraceae), Gobida garudo, Samantpur.

Stembark pounded together with three black pepper is made into pills of pea size Two pills, two times daily is prescribed for one month to treat clinical manifestations of filariasis, 5671 (Kol).

### 6. *Pedilanthus tithymaloides* (L) Poit, (Euphorbiaceae), Hemsagar, Kolai.

Root bark mixed together with sindhaluno (Black salt is made into paste with starch-water the paste is uniformly applied on filarial oedema to subside swelling, 5015 (Oza). Plant latex exhibited anti inflammatory activity.<sup>11</sup>

### 7. *Strebulus asper* lour. (Moraceae), sahada, Adampur.

Powdered stembark (5-10gm), two times daily) is given for 15-20 days to control recurrent attacks, alleviate fever ad subside glandular swellings of lymphnodes. 4963 (Kar).

Powdered stem bark is used in Ayurveda for treatment of filariasis.<sup>12</sup> powdered stembark is popularly used in filarial belts of several eastern districts of U.P.2

The crude extract killed microfilarial as well as adult worms. The filaricidal activity was due to two glycosides reported from the

plant<sup>12</sup>. Therapeutic efficacy of the drug has been clinically established.<sup>2</sup>

### **8. *Vernonia albicans* DC. (Asteraceae), sahdevi, Harisingpur**

Powdered plant (10-20 gm) is advised to drink with 125ml milk (mixed with 5-7 cardamom fruits and 10gm sugarcandy) once morning, in empty stomach for about three months, 5613 (Mrs. Das).

Discussion of the eight remedies *Caesalpinia bonduc* (Gil) and *Strebulus asper* (sahada) are frequently used in man localities of the district. Therapeutic efficacy of *Andrographis paniculata*, *Caesalpinia bonduc*, and *Strebulus asper* as anti pyretic and anti inflammatory drugs has been proved, other remedies such as *ficus bengalensis*, *jatropha curcas*, *pedilanthus tithymaloides*, and *vernonia albicans* are

restricted to this region only. They do not find mention in literature on Indian ethnobotany<sup>13</sup> *Caesalpinia bonduc* seeds are used as one of the ingredients of compound preparation in Unani medicine.<sup>14</sup> *Litsea glutinosa* (stembark) is sold in weekly markets of Bhadrak, motto and tihidi for the treatment of filariasis.

The data clearly provides clue for further phytochemical, pharmacological and clinical research to develop new drugs.

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