

Clinical Research

Effect of Homoeopathic Treatment on Filariasis

(A single blind 69-months follow-up study in an endemic village in Orissa)

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Abstract

A single blind follow-up study was undertaken to assess the effect of homoeopathic treatment on microfilarial clearance and frequency of filarial fevers in an endemic village, India, State of Orissa. Homoeopathic treatment effectively reduced the frequency of filarial fevers by 20 percent ($P < 0.05$) among microfilaraemic cases, with a higher reduction in cases with genital involvement (36%) and mastitis (57%). However, among symptomatic microfilaraemia cases, the frequency of filarial fever (attack) had doubled ($P < 0.05$) following treatment. There was no additional effect on microfilaria clearance in asymptomatic carriers.

Keywords: Filariasis : Microfilaraemia: Clinical trial; India.

Introduction

Human lymphatic filariasis caused by the nematode parasites *Wuchereria bancrofti* and *Brugia malayi* is an important communicable disease of public health importance. Over 75 million persons are estimated to be affected by the disease (WHO 1992.).¹ In India alone about 16 million persons are estimated to be diseased and about 22 million are estimated to be microfilaria (mf) carriers. The state of Orissa alone contributes about 10% of the

total load in India.² The disease has existed for centuries. Current routine management is by Diethylcarbamazine citrate (DEC). DEC is known to be microfilaricidal, sterilizing the adult worm. However, the effect of DEC on various forms of disease and associated fevers has not been promising.³ Moreover the drug has unpleasant side effects.¹ This has resulted in poor compliance, particularly in asymptomatic carriers. The situation thus demands alternatives to DEC therapy. Homoeopathic treatment is known to be free from adverse side effects and may serve as an alternative if found efficacious. The qualitative clinical assessment based on data for the first 2 years has previously been reported.⁴ The present study presents a quantitative assessment of the homoeopathic treatment in reducing microfilaraemia and on the frequency of filarial fever attacks in various categories of patients during the study

Materials and methods

A complete survey was undertaken in a filariasis endemic village near Puri (Orissa State). 20 µl samples of night blood smears were collected for mf examination and clinical assessment of symptomatic cases was also done. The symptomatic cases were classified into four groups: adenitis, involvement of genitalia, lymphoedema and mastitis.

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Each group was further subdivided into 2 groups, comparable with regard to age, sex, duration and severity of symptoms. One subgroup serving as control was given only placebo (globule of sucrose) while the other subgroup was treated with homoeopathic medicines based on individual's symptoms and mf status as per the treatment schedules shown in Table 1. The subjects did not receive any other treatment during the study.

The study was carried out on single blind basis (only the physician knew who was given treatment).⁴ All cases were closely monitored. The information on filarial fever had been previously collected.⁵ Night blood smears were examined using the standard procedure for mf in circulation⁶ at different intervals by one of the authors (NM).

Data and statistical analysis

The study continued over 69 months. Night blood smears were examined 6, 10, 14, 24, 29, 32, 35, 43, 53 and 69 months after the first screening. Problems of non-availability/refusal were encountered at the time of night blood examination. Data of mf counts are known to be skewed and moreover, an individual may not show mf in circulation at any intermediate follow up date. Thus data was transformed on log $10(mf + 1)$ scale and a weighted linear regression model was used to estimate the mf trend.⁷ The values of the regression slope (b) were tested against zero and the 95% confidence interval of the slope computed. The life-table method was used to estimate the effect of treatment on filarial attacks. The relative rate of attacks in treated vs control groups and the 95%

Table-I. Treatment schedule for asymptomatic and symptomatic carries.

Period	Controls	Treated groups	
		Asymptomatic carriers	Symptomatic carriers
Apr.-Sept. 1986	placebo b.d. (6 months)	Rhus tox. 30c altern. w. placebo x 15 d altern. w. placebo b.d.x. 15 d.	Rhus tox. 30c. Apis mel. or Rhod. 30c b.d. x 15 d.
Oct. 1986-Jan. 1987 (4 months)	placebo. 1 dose every 2 wks.	Rhus tox. 10M 1 dose every 2 wks every 2 wks.	Rhus tox. 10M. Apis mel. or Rhod. 10M. 1 dose
Feb. 1987	placebo. 1 dose	Rhus tox. CM. or Rhod. CM. 1 dose	Rhus tox. C.M. Apis mel.
Sept. 1987	placebo, 1 dose 1M potency, 1 dose	individualized treatment	similimum 1M
Feb. 1988	placebo. 2 doses	similimum 10M, 1 month : Thuja 1 M, 1 dose Rhus tox. 20. 1 dose x 30 d	Sulphur 1M. 1 dose for
Sept.-Nov. 1988	placebo. 2 doses ml 1 M.* 1 dose as IC every 3 wks.	Bryonia. 10 drops b.d.: by Thuja 1 M. 1 dose. Rhus tox. 30. 1 dose x 30 d	Sulphur 1 M. 1 dose. followed
Jan. 1989	none	none	Rhus tox. 200. 1 dose x 15 d.

* Potentized microfilariae of *W. bancrofti*.

confidence interval were computed. Persons who could not be contacted after 1-2 initial visits were excluded from the analysis.

Results and discussion

Initial profile of filariasis in the village

The study began in February/March 1986 and 383 (> 90%) persons were examined for

microfilaraemia and clinical symptoms. 15.1% were asymptomatic mf carriers. 8.1% symptomatic mf carriers and 35.5% symptomatic amicrofilaraemics.

Effect of homoeopathic treatment on microfilaraemia

The effect of homoeopathic treatment on mf density is shown in Table 2. Initial mf density

Table-2. Effect of homoeopathic treatment with potentized *W. bancrofti* microfilariae on mf density during 69 months follow-up : results of weighted regression (log scale)

Group	n	Constant (a)	Slope (b)	p value <	95% confidence interval (B)	Est. decline (%)
A Asymptomatic mf carriers						
treated	12	1.2554	-0.01024	0.01	(0.0101-0.0104)	85
controls	6	0.8297	-0.01176	0.01	(0.0116-0.0119)	99
B Symptomatic mf carries						
treated	15	1.4664	-0.01167	0.01	(0.0115-0.018)	87
controls	15	1.4140	-0.01501	0.01	(0.0148-0.0152)	94

Table-3. Effect of homoeopathic treatment on filarial attacks.

Group	n	Person years (Py) observed	No. of attacks	Attack rate/Py	Relative rate	95% confidence interval
A Symptomatic mf + ve treated	15	63.4	39	0.615	2.22	(1.57.3.14)
controls	15	65.0	18	0.277	1.0	
B Symptomatic mf-ve treated	65	281.5	123	0.437	0.81	(0.69.0.96)
controls	60	125.1	139	0.539	1.0	
B1 Genitalia mf + ve treated	24	103.2	35	0.339	0.64	(0.49.0.85)
controls	21	91.0	48	0.527	1.0	
B2 Adenitis mf + ve treated	23	99.3	44	0.443	0.96	(0.74.1.25)
controls	28	121.3	56	0.462	1.70	
B3 Lymphoedema mf + ve treated	11	48.7	32	0.658	0.96	(0.61.1.53)
controls	7	29.4	20	0.680	1.0	
B4 Mastitis mf + ve treated	7	30.3	12	0.396	0.43	(0.24.0.79)
controls	4	16.4	15	0.914	1.0	

levels (a) were higher in the treatment than the placebo group. However, the initial mf density declined at the same rate in both treated and control group, showing no relative advantage of treatment in mf cases.

Effect of homoeopathic treatment on filarial attacks

The results are presented in Table 3. It appears that in symptomatic mf carriers, the frequency of filarial fever had doubled ($p < 0.05$) following treatment. However, in symptomatic amicrofilaraemics (mf negative), the frequency of attack was reduced by 20% following treatment ($p < 0.05$) in comparison to the control group. Subgroup analysis of symptomatics (mf-ve) suggests that the significant ($p < 0.05$) reduction in the frequency of filarial fevers was seen only in cases with involvement of genitalia and mastitis in comparison to the control group. Homoeopathic treatment may aggravate the symptoms in the initial stages of treatment. The 2-fold increase in frequency of filarial fever in treated group vs control among symptomatic mf carriers might have been due to such an 'aggravation' effect.

Otherwise treatment has shown a 19% ($100 \times (1 - 0.81)$) reduction in frequency of filarial fever, particularly in cases with genital involvement (36%) and mastitis (57%). The study suggests that homoeopathic treatment has positive effect (20%) on symptomatic amicrofilaraemics. However, the homoeopathic treatment has no advantageous effect on microfilaraemia clearance among asymptomatic carriers.

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References

1. Expert Committee on filariasis. Lymphatic filariasis. Fifth Report, WHO Tech. Report Series 821. p. 1. Geneva : WHO 1992.
2. Sharma GK. Status. Distribution and method of control vector borne diseases in India in community participation for Disease Vector Control. *Proceedings. ICMR/WHO workshop*, 3-9 Feb. 1986 ; p. 12-13.
3. Smith PG, Richard HM. *Methods for field trials of interventions against tropical diseases* p. 292-95. Oxford : OUP 1991.
4. Ottesen EA. Efficacy of DEC in cradicating infection with Lymphatic dwellings filariae in humans. *Rev. infec. Dis.* 1987; **7**: 341.
5. Subramanyam VR *et al.* Homoeopathic treatment of filariasis, experience in an Indian rural setting. *British Homeopathic Journal* 1990; **79**: 157-60.
6. Sasa M. Microfilaria survey methods and analysis of survey data in filariasis control programmes. *WHO Bull.* 1967; **37**: 629-50.
7. Steel GD. James HT. *Principles and procedures of statistics. A biomedical approach* p. 289. McGraw Hill 1980.