Reviewer's report

Title: Episodic adenolymphangitis due to bancroftian lymphatic filariasis: a longitudinal prospective surveillance in rural coastal Orissa, India

Version: 1 Date: 24 December 2004

Reviewer: Kapa D Ramaiah

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General

The paper quantified the incidence of acute disease form of Lymphatic Filariasis (LF) in two rural villages in the state of Orissa, India. Information on the incidence of ADL from different endemic areas is necessary to understand the burden and issues on management of the disease and hence the paper is important. The methods used by the authors are appropriate, but some refinement of statistical methods is required. The data are well controlled and presented. However, the discussion part is too long, attempted to address too many issues, some of which are not at all related to the study. I recommend the paper for publication after revision as per the suggestions given below.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Data analysis

Different tests of significance were used to™. For better clarity, the name of each test and its purpose may be given.

Pages 4-5. Results

The authors used univariate and multivariate analyses to examine the incidence and duration of ADL episodes in males and females, different pathology groups and age-groups. Since the application of Multivariate analysis is appropriate, univariate analysis becomes redundant and the results pertaining to the latter may be deleted.

Results (Data analysis)

Please refer to Table 1. The anova for incidence and duration of ADL episodes may be carried out separately for lymphoedema and hydrocele patients, because hydrocele affects only the male population. The anova for lymphoedema may include gender and age as independent categorical variables and for hydrocele patients only age should be included (gender is not relevant here as hydrocele is confined only to males). The authors may also examine the effect of gender over age (interaction) on incidence and duration of ADL in lymphoedema patients. The authors may give the F value and its probability of significance for each of the independent variable. The Coefficient values are not that important.

Pages 5-8. Discussion
The main focus of the study is to quantify the incidence of ADL in two rural communities. However, the authors tried to relate too many issues—epidemiological, parasitological, clinical, entomological, economical, immunological, filariasis elimination etc.—to their study, often in a vague manner. For example, it is difficult to draw inferences from “It is consistent with the hypothesis that ADL episodes may be associated with allergic responses to massive parasite antigen release (21,22)” (page 6, paragraph 1, last sentence). The Discussion part may be shortened and made precise. Repetition of points given in Results and Introduction sections may be avoided.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Page 2. Results and conclusions

The statistical significance of the difference in the incidence of ADL between males and females may be given.

The average number of episodes per year is 1.57. Is it per affected person?

Please give standard deviation for the ‘mean duration of 3.93 days’

Background

It is not correct to say ‘inflammation of the lymhoedema’. Please correct it.

Discussion

Page 6, line 13: It may be mean number, not more number.

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Discretionary Revisions (which the author can choose to ignore)

Page 2. Results and conclusions

It is not clear what type of association is expected between acute ADL and microfilaraemia. Hence, it is difficult to interpret the statement “there is no association between acute ADL and infection (microfilaraemia)” Also note that only microfilaraemia prevalence was measured in the study and infection prevalence includes prevalence of microfilaraemia plus other stages of infection also.

Page 3. Study area

Too short an account is given. A few more relevant details may be given. For example, what are the occupations of the study population? Different occupations may cause different levels of physical stress, which is suspected to precipitate ADL episodes.

Data collection

The authors had used symptomatic diagnosis of ADL episodes. No other affordable alternative method is available. However, justification for using this method need not come from African
example as the socio-cultural settings in Africa and India are very different.

Discussion

Page 6 lines 19-20: It is stated that incidence of ADL is higher in bancroftian filariasis than in brugian filariasis. This contrasts with an earlier statement that the incidence of ADL is higher in brugian filariasis (Page 5, Discussion, lines 9-11).

Page 6, last paragraph: While highlighting the disability and economic loss caused by ADL, one should also be cautious that the disability and economic loss caused by chronic disease is life long and much higher.

Page 7, lines 8 -16: Relating ADL incidence with microfilaraemia prevalence is a different aspect and nothing new has come out of the present study. The only point that can be highlighted from this study is the absence of microfilaraemia in a vast majority of ADL patients is in conformity with earlier observations.