

# Limb Elephantiasis as Predictor for the Occurrence and Spread of Lymphatic Filariasis in Kano State, Nigeria

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## Objective

This paper describes how limb elephantiasis was used to determine the occurrence and spread of lymphatic filariasis in Kano state, Nigeria as well as the use of the results for further epidemiological studies.

## Background

Lymphatic filariasis is one of the most prevalent of the tropical diseases, but is also the most neglected (4). Though significant advances have been made in the understanding both the disease and its control (3), there is general lack of information about its socioeconomic effects, prevalence and distribution in most endemic societies (2). Presently, there is global effort towards the elimination of the disease by 2020. The success of this programme depends largely on the use of simple, non-invasive procedures to identify endemic communities (1). Limb elephantiasis is one of the chronic symptoms of lymphatic filariasis that could be easily diagnosed by persons with minimum training. Therefore, the prevalence of elephantiasis could serve as a useful tool to determine the occurrence and spread of lymphatic filariasis in endemic communities.

## Methods

The instrument used for data collection was a questionnaire in which the demographic information, location and grade of the elephantiasis of the infected persons was documented. A case of elephantiasis was defined when an individual was observed to have lymphoedema of the limbs which may be pitting or non-pitting. The search for persons with elephantiasis was done with the help of Monitoring and Evaluation Officers, Village and Ward heads in all the 44 Local Government Areas (LGAs) in Kano State, Nigeria. The search was done in all towns and villages, in houses and market places. The questionnaire was administered in the local language, Hausa.

## Results

156 (0.003%) cases of elephantiasis were recorded in thirty-seven LGAs in Kano State, which is shown in Figures 1a, b, c & d. There were more cases among males 109(0.002%) than females 47(0.008%) in the 37 LGAs. The number of cases seems to increase with age in both sexes reaching a peak at 40-49 year age group. In both sexes no case was recorded among the 0-9 year age group. 139 (90.9%) had elephantiasis located on the lower limbs while 14(9.1%) had it on the upper limbs.

## Conclusion

Elephantiasis an easily identifiable chronic symptom of lymphatic filariasis that could be used to determine the occurrence and spread of the disease as well as use the results to select endemic villages for further studies.

## References

- (1) Gyapong J.O.; Adei, S.; Gyapong, M. and Asamoah, G. (1996). Rapid Community Diagnosis of Lymphatic Filariasis. *Acta Tropica*, 61, 65-74.
- (2) World Health Organization (1997). Tropical Disease Research: Progress 1995 – 1996. Thirteenth Programme Report. UNDP/World Bank /WHO Special Programme for Research and Training in Tropical Disease (TDR). 74 – 85.
- (3) World Health organization (1999). Tropical Disease Research: Progress 1991 -1992 Fourteenth Programme Report UNDP/World Bank /WHO Special Programme for Research and Training in Tropical Disease .TDR/PRI 4/FIL/ 99.1
- (4) World Health Organization (2000). Operational Guidelines for Rapid Mapping of Bancroftian Filariasis in Africa. Document WGO/CDS/CPE/CEE/2000.9. Geneva: WHO.

**Figures 1 a, b, c, & d: Prevalence of elephantiasis in Kano State**

