

Time of presentation for treatment and profile of deformities among leprosy patients in South Eastern Nigeria

*E. J. Peters¹, V. O. Ansa¹, K. K. Imananagha¹ and E. A. Antia²

¹Department of Medicine, University of Calabar Teaching Hospital Calabar, Nigeria.

²Leprosy Hospital, Ekpene Obom, Nigeria

Summary

A 10 year review of leprosy patients seen at Leprosy Hospital Ekpene Obom in South Eastern Nigeria (1988 - 1997) was carried out to evaluate the effect of early identification and treatment of leprosy patients in the limitation of deformities among them. A total of 2,597 patients comprising 1,714 (66%) males and 883 (34.0%) females formed subjects for the study. Of these 288(11.1%) were aged 15 and below while 2,309 (88.9) were above 15 years. Their case records were thoroughly reviewed noting the duration of disease before presentation, type and location of deformity as well as the type of leprosy.

Though there was a steady decline in the total number of leprosy patients seen over the study period as well as a decrease in the mean duration of illness before presentation, approximately 19% of patients still had deformities at presentation, a figure much lower than those reported by other workers. Analysis of the pattern of deformities shows that most patients 71.2% presented with affection of the upper and lower limbs with consequent functional disability.

We conclude that early treatment is an effective means of reducing the prevalence of deformity and thus disability from leprosy. More effective implementation of health education and treatment programmes initiated by the W.H.O should further reduce the scourge of leprosy in our community.

Keywords: *Leprosy; Early presentation; Deformities; Treatment.*

Résumé

Une revue biguinquennale sur les lèpreux a l'Hôpital d' Ekpene Obom dans le sud-Est du Nigéria (1988-1997) avait été entreprise. Le but était d'évaluer l'effet d'une identification au stade précoce de la maladie et un traitement de limiter les déformités entre ces malades. L'étude a été portée sur total de 2,597 malades comprenant 1,714 (66%) males et 883 (34.0%) femelles. Leurs dossiers ont été profondément étudiés montrant la

durée de la maladie avant la présentation, la qualité et la location de la déformité autant que le genre de lépre.

Bien qu'il a été noté un déclin sur le nombre total des lépreux vus durant cette période autant qu'une baisse sur la durée moyenne de la maladie, approximativement 19% des malades ont eu des déformités durant la présentation, un pourcentage bien bas que celui éraï par d'autres chercheurs.

L'analyse de genre de déformités a montré qu'un grand nombre de patients (71.2%) s'était présenté avec des affections au niveau des membres supérieurs et inférieurs avec des désabilités fonctionnelles.

Nous concluons donc, que le traitement au stade précoce est un moyen effectif de réduire la prévalence des déformités et par conséquent la désabilité de la lépre. L'implémentation effective de l'éducation de la santé et les programmes de traitement initié par l'O.M.S. doivent réduire les scourges de la lépre dans notre communauté.

Introduction

Leprosy is a chronic disease that results in various types of deformities and visual impairment. These individuals form a severely disadvantaged group because of these disabilities due to the disease, its social stigma and the difficulty in receiving appropriate treatment.

It is estimated that there are 10-12 million cases of leprosy in the world, out of which only about 5 million are registered for treatment.¹ Furthermore, approximately one third of all leprosy patient are believed to suffer from disability of all grades as a result of deformities. In Nigeria, the Federal Ministry of Health estimates that about 50,000 leprosy patients suffer from severe disability as a result of the disease condition.³ Thus, in highly endemic areas, leprosy is often the most important disabling disease of the adult after tuberculosis.⁴

Recently, there has been a renewed global initiative by the World Health Organisation (WHO) and other related agencies aimed at controlling the high incidence of leprosy. These control programmes involve health education, early identification of patient and use of multi drug therapy introduced in 1982 for the treatment of affected patients. The introduction of effective chemo-

*Correspondence

therapy in national leprosy control programme through multi drug therapy has brought increased attention to the problem of disabilities.

The prevention of nerve damage is the simple most important aspect of leprosy management that is often neglected in our hospitals⁵. Similarly, early presentation of patients for treatment in leprosy hospital is rarely achieved in these hospitals because of social and cultural barriers.

Deformities not surprisingly is a function of the disease duration and hence the need for early identification of affected patients. The duration of disease at diagnosis may vary according to health service coverage, the level of awareness of the disease and social stigma.

The aims and objectives of this study is therefore to access the impact of early identification and treatment of leprosy patients with a view of limiting the prevalence of deformities among patients with leprosy. This will invariably evaluate the success and the extent of effectiveness of the new World Health Organisation global initiative on the control of leprosy. It will also help proffer suggestions on the successful implementation of this laudable scheme of the World Health Organisation.

Material and Method

This study was carried out in a leprosy hospital located in Ekpene Obom, Akwa Ibom State of Nigeria. The hospital serves both as a primary treatment centre as well as a referral centre for management of leprosy to five states in the South East of Nigeria. The field staff also carry out contact tracing to these catchment areas. The pool of patients is thus near representative of leprosy cases seen during the study period. The study in-

involved a 10 year study review of the management of leprosy patient at this hospital from 1988 to 1997 aimed at evaluating the effect of early identification and appropriate treatment of leprosy patient in the limitation of deformities among these patients.

A total of 2,597 patients consisting 1,714 (66%) males and 883 (34%) females were subjects for the study. This figure was the total number of patients who presented in the hospital for treatment during the study period and excluded those that defaulted. They were broadly divided into two age groups, patients 15 years of age and below and those above 15 years.

A thorough analyses of each patients record was carried out. Information extracted included the type of leprosy based on the Ridley Jopling classification⁶, duration of illness before presentation for treatment, age at onset of illness, and pattern of deformity. These were carefully recorded in an information sheet prepared for each patient. All data collected were analysed using EPI Infor Version 5 computer software.

Results

The disease classification and the age distribution of the 2,597 patient under survey on yearly basis are shown in fig. 1a and fig 1b. A total of 288 (11%) patient were 15 years of age and below, while 2,309 (89%) patient were above 15 years.

The legend also shows that a total of 359 patients (13.6%) had Tuberculoid Leprosy, 258(9%) males and 101(4.6%) females. Similarly, 2240 (86%) had Lepromatous leprosy consisting of 1,458 (56%) males and 782 (30%) female. However, there were no borderline types of leprosy identified during the survey.

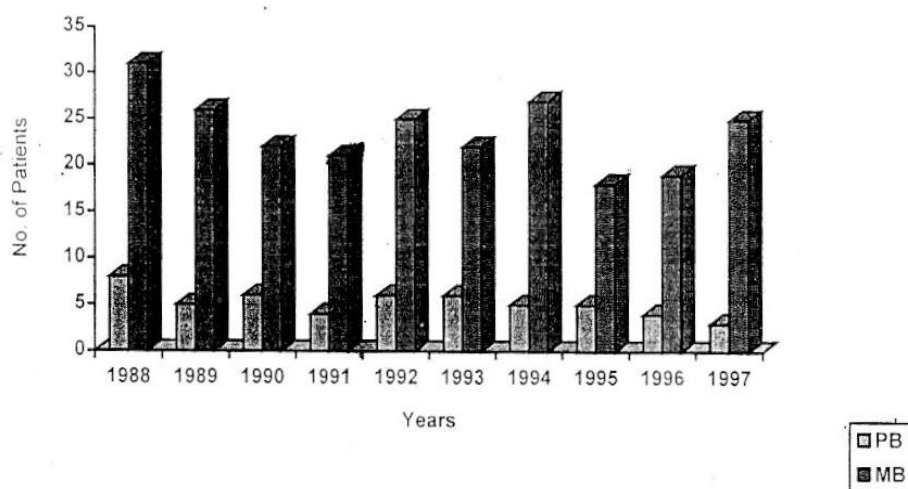


Figure 1a Disease classification of patients aged 15 and below

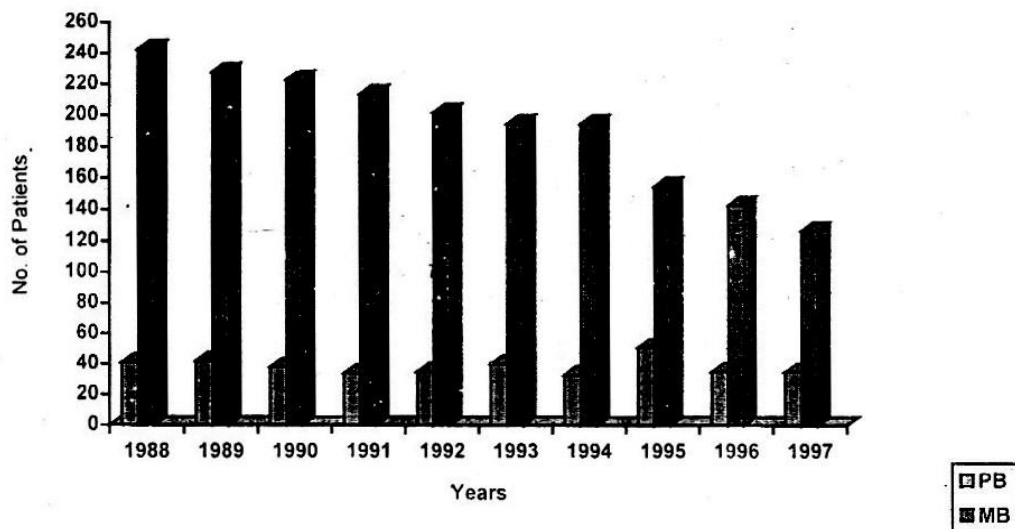


Figure 1b Disease classification of patients aged above 15

Figure 2 shows the yearly distribution of patients and number of patients presenting with deformities, while figure 3 is mean duration of illness before presentation for treatment. The number of patients presenting yearly showed progressive decline as well as the mean duration of illness before presentation. The pattern of de-

mar ulcers. However less than 1% of the patient had deformities of the eye such as lagophthalmos, corneal ulceration and cataract while 3.6% had ear and nose ulcerations. Plantar and palmar insensitivities accounted for 7.8% and 6.6% respectively and these are prerequisite for actual deformity.

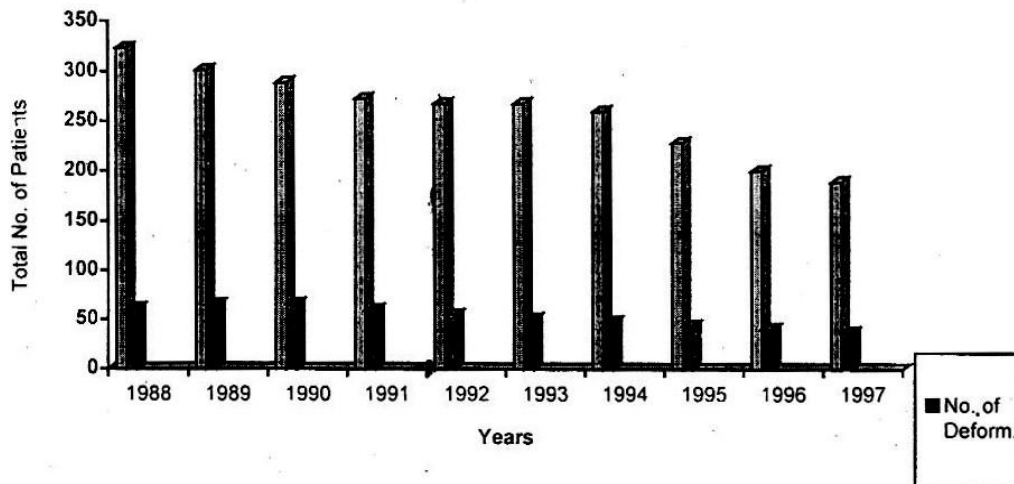


Figure 2 Yearly distribution and number of deformities of patients.

formities and number of patients involved yearly is illustrated in Table I. A total of 373 (14.3%) males and 160 (6%) females had deformities of various parts of the body. The limbs were most affected, the lower more than the upper.

Table II shows the description of various deformities of the patients. Most patients had multiple deformities especially those with long standing disease condition. 6.4% of the patient had claw toes while 5.2% had mobile claw hands, 4.9% plantar ulcers and 4.5% pal-

Discussion

This study has shown that leprosy is still prevalent in Nigeria. The prevalence rate of Africa has been put at 10 per 1,000 with Central African having the highest prevalence of the disease. It is estimated that approximately 25% of the leprosy patients develop various forms of deformities⁸. However, the degree of deformity is dependent on the duration of the disease and time of presentation for treatment. Our study has shown that 19–23% of the patients reviewed during the study period

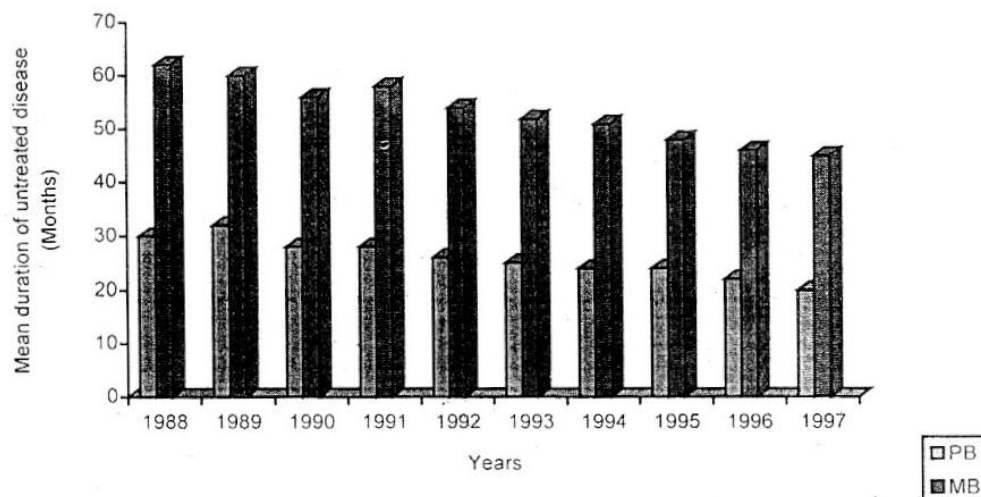


Figure 3 Mean duration of untreated disease before presentation

Table 1 Pattern of deformities

Year	Total No affected		Eye		Ear		Nose		Upper		Lower Limb		Gynaecomastia
	M	F	M	F	M	F	M	F	M	F	M	F	M
1988	43	19	6	3	2	–	4	1	12	9	15	8	2
1989	49	18	6	2	1	1	3	2	10	9	17	12	4
1990	45	21	4	2	3	1	5	1	13	7	15	11	4
1991	42	18	3	1	3	2	4	2	14	7	13	11	2
1992	38	17	3	2	4	1	3	–	12	7	11	8	4
1993	36	15	2	2	3	1	3	2	10	6	11	7	4
1994	33	15	3	2	2	1	3	1	10	5	10	8	3
1995	30	14	2	2	2	1	2	1	8	7	10	7	2
1996	29	12	2	1	2	1	2	2	8	6	9	6	2
1997	26	11	2	1	1	2	2	1	8	5	8	6	1

Table 2 Description of various deformities

Type of deformity/defect	M	F	%–Total
Claw hands	92	43	135(5.2)
Claw toes	103	65	168(6.4)
Plantar ulcer	75	52	127(4.9)
Palmar ulcer	67	50	117(4.5)
Lagophthalmos corneal ulceration cataract	17	7	24(0.9)
Ears and Nose ulceration	56	42	98(3.6)
Palmar insensitivity	105	66	171(6.6)
Plantar insensitivity	143	60	203(7.8)

had deformities. The lower figure may be attributable to earlier presentation of patients for treatment as demonstrated in this study. Iyere⁸ working in Northern Nigeria however report that 3.8% of patients in his series pre-

sented with deformities. A greater percentage (71%) of the deformities in our series were in the extremities and corroborates findings by other workers.^{8,9}

The study also showed that the frequency and degree of deformity were less, the shorter the mean duration of untreated disease. This is similar to findings from other studies which concluded that the incidence of deformities increased among a patient population and also in the number per patient the longer the disease remains untreated.¹⁰⁻¹¹ It was also noted that patients were presenting earlier for treatment as the year progressed and there was thus a reduction in the frequency of deformities at presentation over the 10 year study period. This could be attributable to the increase awareness through health education of the need to report early for diagnosis and treatment. This has also manifested in the steady decline in the number of new cases that presented during the period. Therefore the efficacy of the multidrug

therapy introduced by WHO in 1982 is not in doubt. The renewed effort by the WHO in control of leprosy may have begun to produce the desired impact of reducing the prevalence of the disease and subsequent deformity as well as limiting disability.

Recommendation drawn up by the International Federation of Antileprosy Association (ILEP) advocates a programme that gives high priority to the prevention of disability and education of patients in self care¹². This involves patient learning to avoid wounds, skin cracks and joint stiffness, as well as knowing how to care for wounds.

In conclusion, the practice of early identification of leprosy patients and subsequent treatment should be encouraged through enlightenment of target communities. This can be done by use of health officers, the mass media and non governmental organisations.

Acknowledgements

We are grateful to the management of Leprosy Hospital Ekpene Obom for granting us the permission to carry out this study. Our gratitude also goes to the medical superintendent and medical record staff of the hospital for their invaluable assistance during the survey.

References

1. Courtright P, Johnson GJ. Prevention of blindness in leprosy; revised edition; international centre for eye, London 1991: 1–2.
2. Jopling WH. Handbook of Leprosy 3rd Edition; William Heinemann Medical Books Ltd. London 1984: 104–108.
3. Federal Ministry of Health Bulletin World Leprosy day celebration in Nigeria 1999: Vol. 1 (1).
4. Parry EHO. Principles of medicine in Africa, 2nd Edition, ELBS London. 206–7.
5. Bryceson A, Pfaltzgraff RE. Leprosy; 2nd edition, Edinburgh Churchill Livingstone 79–80.
6. Ridley DS, Jopling WH. Classification of Leprosy according to immunity, a five group system: International Journal of Leprosy 1966: 37 255–323.
7. Thangaraj RH, Yawalkar SJ. Leprosy for medical practitioners and paramedical workers; ciba-geigy limited, Basle, Switzerland, 1987: 72–73.
8. Iyere BB. Leprosy deformities experience in Molai Leprosy Hospital Maiduguri, Nigeria, Lep. Rev. 61, 171–179.
9. Lechat MT. Future strategies of leprosy control; paper presented at first International Leprosy symposium in Clino Gvang-zhou, 1985: 2–3.
10. Enna CD, McDowel F, the deformities of leprosy. In surgical rehabilitation in leprosy, Williams and Wikins Co. Baltimore, 419–420.
11. Hamilton JM, Thangaraj RH. Prevention of deformity. In a manual of leprosy, 4th edition the leprosy health, Southern Asia, New Delhi 288–324.
12. Evans Mark, lauwoods Diamo, Leprosy: a clinical update: Afri. Health. 1999 21 (b) 14–6.