

MARY SLESSOR JOURNAL OF MEDICINE

ISSN1119-409X



Published by University of Calabar Teaching Hospital

MARY SLESSOR JOURNAL OF MEDICINE

Vol 2 No. 2

© UNIVERSITY OF CALABAR TEACHING HOSPITAL

ISSN 1119-409X

Rowland Ndoma-Egba FRCS:

Emmanuel E. Ekanem FMC (Paed):

Rosemary Archibong LLB (Hons):

Chief Medical Director

Chairman, Medical Advisory Committee

Director of Administration

Editor-in-Chief

Professor G. Chuks Ejezie

Editors:

Prof. J.J. Andy

Prof. S.E.E. Efem

Dr. E.E. Ekanem

Dr. S.M. Udoh

Consulting Editors:

Prof. G.C. Onyemulekwe (Zaria); Prof. L.A. Salako (Lagos); Prof. K.M.O. Etta (Calabar); Prof. S.J. Utsalo (Calabar); Prof. C.E. Anyiwo (Nnewi); Prof. O. Onuba (Aba); Prof. D.A.A. Akintonwa (Calabar); Prof. F. Okonofua (Benin); Prof. Ed' B. Attah (Calabar); Prof. W.I. Onuigbo (Enugu); Prof. I.A. Salimonu (Ibadan); Prof. O.O. Kale (Ibadan); Prof. J. C. Azubuikwe (Enugu)

Profile of Childhood Leprosy in South Eastern Nigeria.

E.J Peters, V.O Ansa, E.E. Philip Ephraim and J.U. Ekott

*Department of Medicine,
University of Calabar Teaching Hospital,
Calabar*

ABSTRACT

A ten-year review of children 0-15 years who presented at Leprosy Hospital Ekpene Obom in Southeastern Nigeria was carried out to determine the profile of Childhood Leprosy. A total of 288 children, 187 males (64%) and 101 (35.1%) females formed subjects for the study. They were part of the 2597 leprosy patients seen at the centre over the study period. Thus 11.1% of the cases reviewed presented with leprosy in childhood. Lepromatous leprosy accounted for the 81.9% of the cases while tuberculoid leprosy was found in 18.1%. Sixty-four percent of the children had a positive history of family contact and 14-25% of them had various forms of deformity at presentation. We conclude that childhood leprosy is still a significant health problem in Nigeria and lepromatous leprosy is not as rare in childhood as previously reported. The role of health education, contact tracing and prompt treatment cannot be over-emphasized. Prospective studies in various parts of the country are thus necessary to ascertain the true magnitude of the problem.

Key words: Leprosy, Children and Southeast Nigeria.

INTRODUCTION

Leprosy is still one of the major infectious diseases affecting the inhabitants of Asia and Africa¹. World-wide, there are probably about 10-12 million cases² and children from a sizeable percentage of those afflicted. Leprosy can occur at any age although it is rare in infants³. Being a communicable disease, children who are usually born healthy are likely to contract the disease from either parents or close family contacts suffering from the disease. However, although it is generally accepted that leprosy bacilli do not cross the placenta, bacillary antigens are able to do so². About one third of the children so affected have significant deformities, thus increasing the social burden to the community and government⁴. Prolonged contact of children with affected persons particularly infected parents is an important factor in this regard.

This study is therefore aimed at determining the profile of childhood leprosy in South Eastern Nigeria with a view to establishing the magnitude of the problem and identifying factors responsible. It will also proffer suggestions as to guide the successful implementation of the various control programmes of the World Health Organization. Factors militating against effective control of the disease may thus be elucidated.

MATERIALS AND METHODS

This study was carried out in a Leprosy Hospital located at Ekpene Obom, Akwa Ibom State Southeastern Nigeria. The study involved a 10 years review of Leprosy cases presenting in children 0-15 years between 1988 and 1997. A total of 288 children consisting of 187 males and 101 females formed subjects for the study. Case notes of these children were reviewed and information extracted

included the type of leprosy based on Ridley-Jopling classification⁵, age at onset of illness, sex, pattern of complications, and possible family contacts. The data were carefully recorded in an information sheet prepared for each patient. All data collected were analyzed using EPI-info version 5-computer software.

RESULTS

Table I shows the sex distribution of patient under study. A total 187 (64.9%) were males and 101 (35.1%) females. Table II shows the distribution of the type of leprosy. Lepromatous leprosy occurred in 236 (81.9%) and tuberculoid Leprosy in 52 (18.1%). The yearly distribution and mean duration of illness of patient in each disease group are illustrated in Table 3.

Table 1: Sex Distribution of Patients

Year	Males	% n= 288	Females	% n= 288
1988	24	8.3	15	5.2
1989	19	6.6	12	4.1
1990	18	6.3	10	3.5
1991	19	6.6	6	2.1
1992	23	8.0	8	2.8
1993	19	6.6	9	3.1
1994	22	7.6	10	3.5
1995	15	5.2	8	2.8
1996	13	4.5	10	3.5
1997	15	5.2	13	4.5
Grand Total	187	64.9	101	35.1

Table 2: Distribution of Types of Leprosy

Years	Lepromatous	% n=288	Tuberculoid	% n = 288
1988	31	10.8	8	3.0
1989	26	9.0	5	1.7
1990	22	7.6	6	2.1
1991	21	7.3	4	1.4
1992	25	8.7	6	2.1
1993	22	7.6	6	2.1
1994	27	9.4	5	1.7
1995	18	6.3	5	1.7
1996	19	6.6	4	1.4
1997	25	8.7	3	1.0
Total	236	81.9	52	18.1

There was a gradual decline in the number of children with disease in the last five years of survey. The general characteristic and percentage deformities of patient are shown in the Table IV. An average of 64% of the children under study had a positive history of family contact. Fig. 1 is the age group distribution of patient under study. There was a graded increase in number of patient with advanced age.

DISCUSSION

This study has shown that 11.1% of the leprosy patients under study were children. This gives an insight to the probable community prevalence rate. Studies to determine this rate are not yet available. However, various prevalence for childhood leprosy have been reported. Barakanfitye had reported a prevalence of 9% for African sub-region about a decade ago⁶ Studies in other parts of the world however gave different rates. In Madras the rate was 20% while 3% was reported from the southern part of United States of America⁷.

Most of the children had lepromatous leprosy with 81.9% of them being affected. Only 18.1% had tuberculoid leprosy. This is in sharp contrast to reports from other part of the world where Tuberculoid Leprosy was found in majority of cases and Lepromatous Leprosy thought uncommon in children 15 years and below^{8,9,10}. The higher prevalence of lepromatous leprosy which is usually associated with more deformities may explain the large number with various forms of deformity (14-25%). The fear of stigmatization by the parents may also have contributed as it encouraged late presentation of the children for treatment. Jamisen et al¹¹ in an earlier series from Northern Nigeria had concluded that no disability or any lasting evidence of the disease was seen in children. This is in contrast to our

Table 3: Yearly distribution and mean duration of illness of patients in each disease group.

Year	Total No. of Pts	Males	Females	TL	Means duration of illness (months)	LL	Means duration of illness (Months)
1988	39	24(62)	15(38)	8(21)	30	31(79)	62
1989	31	19(61)	12(39)	5(16)	37	26(84)	60
1990	28	18(64)	10(36)	6(21)	28	22(79)	56
1991	25	19(76)	6(24)	4(16)	28	21(84)	58
1992	31	23(68)	8(26)	6(19)	26	25(81)	54
1993	28	19(68)	9(32)	6(21)	25	22(79)	52
1994	32	22(69)	10(31)	5(16)	24	27(84)	51
1995	23	15(65)	8(35)	5(22)	24	18(78)	48
1996	23	13(57)	10(43)	4(17)	22	19(83)	44
1997	28	15(54)	13(46)	3(11)	20	25(89)	37

TL – Tuberculoid Leprosy

LL – Lepromatous Leprosy

- Figures in bracket are percentages

findings. Children in their series were probably not followed up long enough. The risk of leprosy in children is higher where there is family contact. Following contact, up to 60% of children have been found to develop the disease after an incubation period of 3-5 years¹². This corroborates the finding in this study which has shown that 64% of the children in our series had a positive history of family contact. A study in Hawaii further confirmed this fact as it was found that 50% of new case were in children with family history of contact while only 2% were recorded from uninfected families¹³. The role of family contacts in the prevalence of childhood leprosy is thus fairly well established.

There was a gradual decline in the number of children presenting with leprosy in the last five year under review. This could be attributed to the reduction in the prevalence of the disease as reported by World Health Organization which showed a reduction from 5.4 million in 1995 to 0.80 million in 1998 as a result of the introduction of Multi-drug therapy (MDT) in National Control programme in all endemic countries¹⁴.

Table 4: General Characteristics and Percentage Deformities of Patients.

Year	Total No. of pts	Family Contact	Mean age at onset (year)	Deformity
1988	39	24(62)	4	8(21)
1989	31	25(80)	6	6(19)
1990	28	23(82)	3	5(18)
1991	25	18(72)	4	4(16)
1992	31	19(61)	5	8(25)
1993	28	17(61)	2	6(21)
1994	32	18(56)	3	7(21)
1995	23	14(61)	5	4(17)
1996	23	12(52)	6	3(13)
1997	28	15(54)	4	4(14)

- Figures in bracket are percentages

We conclude that childhood leprosy is still a significant health problem in Nigeria despite the marginal decline in incidence noted in the study. The early diagnosis and correct treatment of leprosy in children is therefore of great importance as this will prevent deformity and reduce the number that progress to Lepromatous Leprosy. The role of health education, contact tracing and prompt treatment cannot be over-emphasized. Prospective studies in various parts of the country should be initiated to determine the true incidence and magnitude of this health problem.

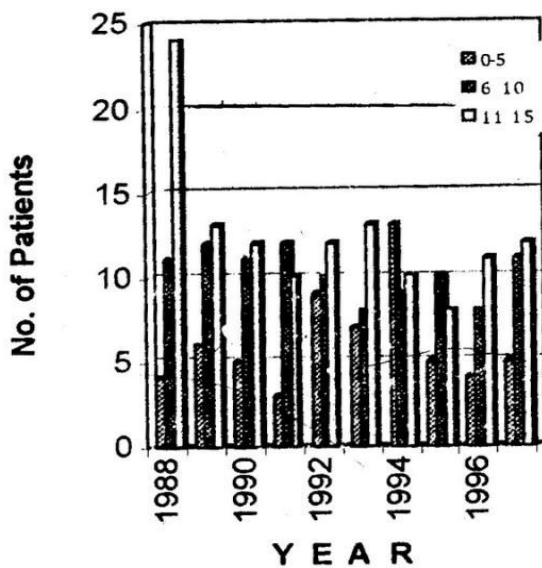


Fig. 1: Age distribution of patients

ACKNOWLEDGMENTS

We are grateful to the management and staff of Leprosy Hospital, Ekpene Obom for assisting us in this study.

REFERENCES

1. Thangaraj RH, Yawalicar SJ., Leprosy for Medical Practitioners and Paramedical workers, Ciba-Geigy Limited, Switzerland 1987; 15-16.
2. Reports of a WHO study Group, Epidemiology of Leprosy in Relation to Control; Technical report series, World Health Organization, Geneva. 1985; 716, 11-29.
3. Bryceson A. Pfaltzgraff RE., Leprosy Medicine in the Tropics, Second Edition, Churchill Living stone, Edinburgh, 1989; 117-8.
4. Hamilton JM, Thangaraj RH., Prevention of Deformity: In a Manual of Leprosy, 4th Edition, Leprosy Mission, Southern Asia, New Delhi, 1985; 188, 324.
5. Ridley DS, Jopling, WH., Classification of Leprosy according to immunity, a five group system. International Journal of Leprosy 1966; 37-255-323.
6. Barakanfitye BE: WHO report of the interregional conference on leprosy control in Africa, Brazzaville Nov. 1989. WHO/CDD/UP. 89.1
7. Badger LF. Epidemiology: In Leprosy in Theory and Practiced. Cochrance RG and Derey TF, Bristol, 1966; 66-97.
8. Keeler R, Deen RD,- Leprosy in Children 0-14 years; report of an 11 year control programme Lep. Rev. 1085; 56:239-48.
9. Brubaker ML, Myers WM, Bouland J, - Leprosy in Children one year of age and under Int, J. Lepr. 1985; 53:517-23.
10. Martinez DV, Gallego G, Gyi MM, Tamandong CT, Sandaresan T, Bechell LM, Kyaw L. Epidemiological Information on Leprosy in Singu area of Upper Burma. Bull WHO 1985; 58:81-9.
11. Jamisen DG, Vollum RL., Tuberculous Conversion in Leprosy Families in Northern Nigeria. Lancet 1968; 1271-74.
12. Jopling WH., Handbook of Leprosy, Third Edition, William Heinemann Medical Books Ltd., London 1-2, 1984.
13. Horton RJ, Povey S., Family Studies in Leprosy, International Journal of Leprosy 1966; 34: 408-416.
14. Workplan on Chemotherapy of leprosy, WHO Bulletin on special program for Research Training in Tropical Disease, Jan. 199; 1-2.