

AN EYE CARE OUTREACH PROGRAMME IN THE FEDERAL CAPITAL TERRITORY

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SUMMARY

Objectives:

- To describe an eye care outreach programme in the Federal Capital Territory (FCT) and the findings therefrom.

Main Outcome Measures: Causes of blindness and ocular morbidity, prevalence of blindness.

Methods: The programme was sponsored largely by the Bartimaeus Trust. Eighteen communities with a total population of 1083, all within two hours or less of commuting distance to the city of Abuja, were included in the outreach programme. The communities were a mixture of urban, semi-urban and rural. The subjects were volunteers who responded to electronic, poster and other forms of publicity for free eye examinations.

Findings: The programme was well received by the communities. The major causes of ocular morbidity were refractory errors (40.4%), allergic/vernal conjunctivitis (18%), pterygium (7.2%) and cataracts (3.0%). Prevalence of blindness was 2.7% among the examined population. The main causes of blindness were cataracts (37%), aphakia mainly from couching (18.5%), glaucoma (14.8%), and pathological myopia (14.8%).

Conclusions: Outreach programmes are useful for the social marketing of eye care services, and to identify major eye problems within a given catchment area. Cataracts are still a major problem within the FCT and more needs to be done to reduce the backlog. The rarity of onchocerciasis is remarkable but is probably attributable to recent population influx.

Key words: eye care, outreach, ocular morbidity, blindness, Federal Capital Territory

INTRODUCTION

Eye care outreach programmes assist in the social marketing of eye care services. The Aravind experience¹ among others, has shown that for a viable, sustainable, low cost and high quality eye care unit to survive economically in Third World economies, a high volume of patients is essential. It is, therefore, necessary to find ways of creating awareness among catchment communities so that patient put-through is sustained. This can often best be achieved through eye camps. Outreach programmes also help to define the extent of the 'cataract backlog'.² It also helps to generate useful community-based (as opposed to hospital-based) data on ocular morbidity and blindness.

The Rachel Eye Center (REC), located in Abuja, the Federal Capital Territory of Nigeria, has been carrying out community-based outreaches since 1997. These have been sponsored mainly by the Bartimaeus Trust, a Christian organization based in Abuja. The Abuja Lions Club has also sponsored one or two camps. This communication describes the programme and findings therefrom.

The objectives of the REC outreach programme were:

- To create awareness on the range and scope of eye care services available to the community through the centre.
- To facilitate the provision of low cost, high volume surgical services.
- To generate community-based data on ocular morbidity and blindness within the catchment area of the hospital.

MATERIALS AND METHODS

This report is on 18 communities visited between November 1997 and November 2000. The communities are all within commuting distance of Abuja. They were

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a mixture of urban, semi-urban and rural communities. The examined populations varied from 26 to 110, people averaging 67. The Rachel Eye Center outreach team comprising an ophthalmologist, an optometrist, an optician, an ophthalmic nurse and other support staff, planned the outreach activities in advance with the sponsors and community leaders. Planning was carried out on an average of three months in advance. The camps were publicized through radio, television, posters and handbills. Strategic use was also made of churches and mosques. In addition, handbills were distributed in markets and community centres. Camps were usually held in primary school buildings and community health centres where available

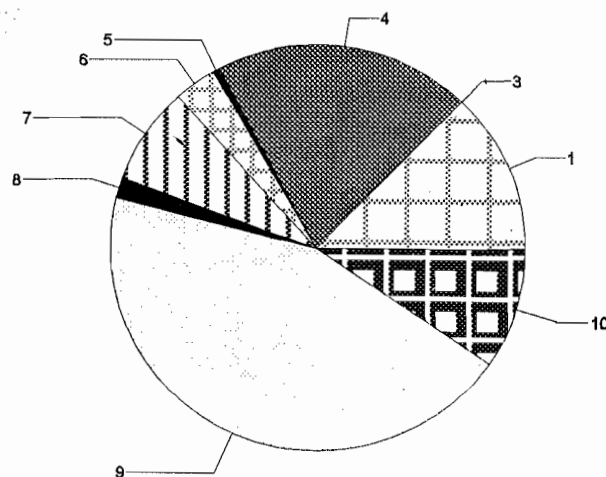
Data on ocular morbidity was entered into prepared protocols. Name of community, examiner, date of examination and personal details of the patient, such as name, age, sex, visual acuity (Snellen, in available outdoor light) and main cause of ocular morbidity were all recorded. Intraocular pressure was measured when indicated, using Schiötz tonometry. Simple refractions were carried out on the spot, while more complicated refractions were carried out at the REC. Patients requiring surgery were counselled and referred to the centre. Surgical services and medical treatment were offered at highly subsidized rates. Educational pamphlets on common ocular problems were distributed free of charge to patients. Data was entered into SPSS software database and analysed using the same programme. Graphs were also prepared using the programme. In the analysis of ocular morbidity, the right eye was used as the sentinel. This simplifies the analysis but is expected to slightly underreport the prevalence of morbidity.

RESULTS

Findings from the 18 communities were pooled in the following analysis. One thousand and eighty-three individuals were seen during the period under review. Of these, 55.8% were male, while 44.2% were female (604 male, 479 female, F:M 1:1.26). Their ages ranged from 1-100 years with a mean of 33.14 and SD of 15.8. Of the studied population, 2.7% had visual acuity (< 3/60) in the better eye and were therefore blind by WHO criteria; 4.5% were visually handicapped (vision < 6/18 but better than or equal to 3/60 in the better eye). One hundred and twenty-six individuals (11.6%) were normal. Refractive errors constituted the commonest presenting problem (438, 40.4%) followed by allergies such as vernal conjunctivitis (18.0%). Cataracts were seen in 3% and glaucoma in 1.4% of the population. Onchocerciasis was not encountered in this particular series. Pterygium was not an uncommon problem, being found in 7.2% of all those examined. Trachomatous lesions were seen in three cases (0.3%) (table 1, figure 1).

Table 1. Causes of ocular morbidity within the FCT (right eye as sentinel)

Cause	Frequency	Percentage
Trachoma	3	0.3
Toxoplasmosis	6	0.6
Other corneal disease	4	0.4
Glaucoma	15	1.4
Cataracts	32	3.0
Pterygium	78	7.2
Others	91	8.4
Normal	126	11.6
Allergic/ vernal conjunctivitis	195	18.0
Refractive errors (including presbyopia)	438	40.4
Unstated	94	8.7
Total	1083	100



1 = normal, 3 = trachoma, 4 = allergic/ vernal, 5 = corneal diz, 6 = cataract, 7 = pterygium, 8 = glaucoma, 9 = refractory, 10 = others

Figure 1. Distribution of ocular morbidity within the Federal Capital Territory

The causes of blindness were analysed. The most frequent cause of blindness was cataracts (10 cases, 37%). Complicated aphakia, mostly due to couching, was responsible for blindness in 5 cases (18.5%). Even with correction, many of these cases did not improve significantly. Glaucoma was responsible for 4 cases, while optic nerve disease of unknown aetiology,

possibly onchocercal, was responsible for one case, as was toxoplasmosis. Posterior segment disease, possibly pathological myopia, was responsible for the four remaining cases of blindness (table 2, figure 3).

Table 2. Causes of blindness in the FCT (right eye as sentinel)

Cause	Frequency	Percentage
Toxoplasmosis	1	3.7
Optic nerve disease	1	3.7
Maculopathy	2	7.4
Glaucoma	4	14.8
Pathological myopia	4	14.8
Aphakia	5	18.5
Cataracts	10	37.0
Total	27	100.0

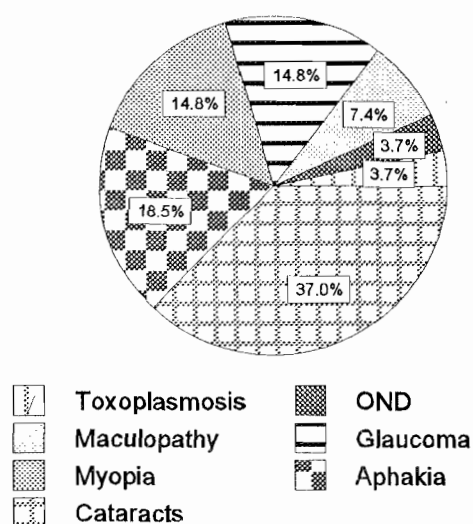


Figure 2. Distribution and aetiology of blindness within the Federal Capital Territory

DISCUSSION

The importance of outreach services as an integral part of the activities of eye centres has been commented upon by several workers.^{2,3} This has been described as the ‘social marketing’ of eye care services. There is a lot of ignorance in Nigerian communities as in other Third World countries: patients do not know where to go and what services are available. There is also a fear of the unknown, and a widespread belief that the services are not likely to be affordable. In a study conducted by Rabi and Abiose,⁴ 57% of patients that needed lid surgery did not present themselves for surgery due to

financial reasons. This has been borne out in this study by the fact that couching was responsible for blindness in five individuals who obviously sought alternative therapy.

One important ‘by-product’ of these outreaches is the opportunity to offer counsel, especially to patients with cataracts and glaucoma, which are important causes of reversible and preventable blindness in this environment.

The population structure of Abuja has changed since the days of Roger⁵ with the influx of migrants and settlers from all over the country since the territory was declared the Federal Capital. There has also been an increase in the population of the FCT from about 300,000 in 1993 to an estimated 1.5 million, and this has expectedly affected the pattern of ocular morbidity. Onchocerciasis was reputed to be a major problem and in fact accounted for objections from certain quarters to move the nation’s capital to the territory. As expected, the population influx has affected the transmission dynamics of the blackfly vector (simulidae) by reducing the transmission potential^{6,7} even where no direct vector control activities have been undertaken. The rarity of onchocerciasis was also noted in the rural communities visited.

Trachoma, another common sub-Saharan disease, was encountered in 3 cases, suggesting that it is an uncommon problem particularly in children who are regarded as the ‘reservoir’ of infection. Cases of trachomatous pannus, scarring and entropion have, however, been occasionally encountered, especially in clinical practice, in which case entropion surgery was performed. This again may reflect changes due to urbanization.⁸

The common problems now encountered are refractive errors and allergic diseases including vernal conjunctivitis in children. Cataracts, however, remain the commonest cause of blindness. It is interesting to note that several patients did not present for extraction of the cataracts mainly because of the cost. Glaucoma is still obviously a significant problem, best managed in our experience by offering sight saving trabeculectomy early. We have found, as others in developing countries^{9, 10} that compliance with medical therapy is not high largely due to costs and the irregular availability of medicaments.

Although few cases were seen in our field series, we find in the clinics, that toxoplasmosis affecting the macula as well as other maculopathies are now a significant cause of blindness and ocular morbidity in the FCT. Ayanru has also commented on the significance of this problem in Benin.¹¹ Often, the best that can be offered to these patients are low vision aids (LVA), which are available at the LVA centre based at the ECWA eye hospital in Kano.

The population under consideration here is a volunteer population and it can be argued that there is a bias in that persons with eye problems are more likely to present, hence the prevalence of blindness of 2.7% of the population may be exaggerated. The influence of methodology on the 'prevalence of blindness' in a given community has also been commented upon (Babalola et al., accepted¹²). The findings in the study under reference suggest that prevalence based on the examined population tends to be slightly but not significantly higher than prevalence based on whole community examination with the total population being used as the denominator. All the same, figures obtained from outreach services are likely to be a better reflection of the situation in the community than hospital-based data. The figures obtained, therefore, suggest that more needs to be done to reduce the prevalence of blindness in communities within the FCT especially with regard to the cataract backlog. Low cost, high volume, cataract surgery can only be brought to bear where there is adequate social marketing of eye care services, ie, creating sufficient awareness in the community as to the availability of services at an affordable price. Practice-centred eye care outreach is a means of achieving this awareness.

REFERENCES

1. Babalola OE. Nigerian ophthalmology and the Aravind model. *Nig J Ophthalmol* 1998; **6(1)**: 16-19.
2. Ezepue UF. The problem of cataract backlog in Anambra and Enugu states of Nigeria: A solution in community outreach services. *Nig J Ophthalmol* 1993; **2(1)**: 21-28.
3. Babalola OE, Murdoch IE and Abiose AA. Patient selection and personnel utilisation in rural cataract surgery. A Nigerian experience. *Nig J Ophthalmol* 1993; **2(1)**: 16-20.
4. Rabiou MM and Abiose A. Magnitude of trachoma and barriers to uptake of lid surgery in a rural community of northern Nigeria. *Ophthalmic Epidemiol* 2001; **8(2-3)**: 181-90.
5. Roger FC. The Simulium control scheme at Abuja, Northern Nigeria, and its effect on the prevalence of ocular onchocerciasis. *Trans R Soc Trop Med Hyg* 1973; **67(2)**: 225-37.
6. Adewale B, Mafe MA and Oyerinde JP. Infectivity and transmission dynamics of Simulium Damnosum s.l. around Owena Dam (Ondo State). *West Afr J Med* 1999; **18(4)**: 257-60.
7. Toe L, Tang J, Back C, Katholi CR and Unnasch TR. Vector parasite transmission complexes for onchocerciasis in West Africa. *Lancet* 1997; **349(9046)**: 163-6.
8. Babalola OE. Trachoma in Kaduna, Northern Nigeria: Recent observations on pattern of clinical presentation. *Trop and Geog Med* 1988; **41**: 41-44.
9. Patel SC and Spaeth GL. Compliance in patients prescribed eye drops for glaucoma. *Ophthalmic Surg* 1995; **26(3)**: 233-6.
10. Thomas R and Billson F. The place of trabeculectomy in the management of primary open-angle glaucoma and factors favouring success. *Aust NZ J Ophthalmol* 1989; **17(3)**: 217-24.
11. Ayanru JO. The problem of uveitis in Bendel State of Nigeria: Experience in Benin City. *Br J Ophthalmol* 1977; **61(10)**: 655-9.
12. Babalola OE, Murdoch IE, Cousens SN, Abiose AA and Jones BR. Blindness - How to assess numbers and causes? *Br J Ophthalmol* 2003; **(83)**: 282-284.