

CORRESPONDENCE

Setting up an eye service in rural Africa

EDITOR.—The prevalence of blindness in Africa, both for adults and children, is the highest in the world.¹

Cataract accounts for over half of this blindness and a large part of the remainder (trachoma, xerophthalmia, onchocerciasis, glaucoma) is preventable.²

There is on average one ophthalmologist per million population in Africa today. Most of these specialists are practising in the capital cities and large conurbations.³ Yet a majority of the population still resides in rural areas gaining a livelihood from subsistence farming. Access to affordable eye care for most people is therefore severely limited.

In English speaking Africa the penury of ophthalmic nurses and doctors is being tackled realistically with diploma and fellowship training courses available in west, east, and southern Africa. But the 19 French speaking countries south of the Sahara lag far behind, with only a few teaching centres that are incapable of meeting the shortfall of trained eye workers and whose expertise is largely unadapted to the realities of the region. Up to a third of all ophthalmologists in francophone Africa perform no surgery at all and those who do perform, on average, only 160 cataract operations each year.³

In October 1990 I was seconded to the Ministry of Health in the Republic of Benin to establish an eye service based in the provincial town of Abomey (population 65 000) 130 km north of the capital Cotonou. A new district general hospital with 200 beds had been built during the 1980s and a fully equipped ophthalmic consulting room was unused. At that time Benin had five national ophthalmologists for a population of just under five million people. All five were working in either Cotonou (economic capital) or Porto Novo (administrative capital), cities only 30 km apart on the southern coast. No ophthalmologist worked inland.

A national survey conducted by the WHO in 1990 to measure the prevalence of blindness and visual handicap in Benin revealed 0.63% and 2.5% respectively⁴; 54% of blindness is caused by unoperated cataract. Glaucoma 15% and corneal pathology 11% are the other major causes of bilateral blindness.

Four priorities were established for the new work in Abomey.

- (1) To establish an eye service for all sections of the community by the use of appropriate technology at affordable prices.
- (2) To place an emphasis on the surgical treatment of cataract and glaucoma.
- (3) To train eye nurses.
- (4) To develop an outreach service by holding eye clinics in peripheral towns and to perform eye surgery, where suitable facilities existed, as close to the patients home as possible.

RESULTS

Annual new patient registrations at the base hospital rose from under 700 in 1990 to nearly 4000 in 1995. Eye surgery rose from 50 in 1990 to over 1100 in 1995 (including 618 cataract operations and 232 trabeculectomies).

All cataract surgery, except on children, was performed under local anaesthesia and was generally intracapsular using a cryoprobe. Aphakic correction was with standard +10.00 or +11.00 glasses imported from India. No intraocular lenses were implanted.

Three general nurses were given a full training both locally in Benin and at the regional Institut d'Ophthalmologie Tropicale en Afrique (IOTA) in Bamako, Mali. Each received the diploma of "infirmier-spécialiste en ophthalmologie" which is recognised throughout French speaking Africa.

An extensive outreach programme was undertaken. One day each week was devoted to holding clinics within a radius of 200 km from the base hospital. Over 40 towns and villages were visited, many regularly. Eye surgery was performed in five other hospitals. Within a period of 5 years we became the busiest surgical eye service in francophone west Africa, outside the long established centre in Bamako, Mali.

The problems encountered were as follows:

(1) No progress was made in integrating national ophthalmologists into the project. By 1994 there were 15 national ophthalmologists working in Benin, all but two working in one of the capital cities. There was no central planning in the Ministry of Health for equipping regional hospitals with ophthalmic staff or materials. Hence the accumulation of ophthalmologists in the capital cities in private practice.

(2) The training of ophthalmologists in francophone Africa did not include any concept of community eye health. Our emphasis on developing an outreach into the interior was entirely new to ophthalmologists in Benin. Rapid examinations of large numbers of patients in unsophisticated surroundings in order to recruit patients blinded by cataract or threatened with blindness from glaucoma, trichiasis, etc, does not appeal to specialists trained only in university hospitals. It is looked upon with suspicion, much as some doctors in America sneer at "socialised" medicine in the United Kingdom.

(3) The use of appropriate technology, generic prescribing, and standard spectacle corrections is similarly viewed with disapproval and considered to be "second rate". However high technology, proprietary medicines, and complicated spectacle prescriptions are financially out of reach of the majority of the population.

(4) Moderate salaries in government service do not encourage highly qualified staff to commit themselves to service in the rural areas. Private practice in cities proves too strong an attraction.

(5) International agencies have over many years "motivated" medical personnel with substantial per diem payments and other allowances. Today it is expected that every project must be similarly generous in order to interest their staff. A purely financial motivation however can never replace dedication to the task. And the long term sustainability of medical work in impoverished communities can never be guaranteed if external funding is always required.

CONCLUSION

Our 6 year project in Abomey demonstrated clearly the huge unmet need for appropriate eye care in rural Africa. We quickly became very busy. We showed that eye care need not be expensive or confined to capital

cities. We hope it will encourage others to set up eye services for the millions of blind and visually handicapped people in rural Africa today.

ANDREW R POTTER
Hôpital St Jean de Dieu, BP487, Parakou,
Republic of Benin

- 1 Foster A, Johnson GJJ. Magnitude and causes of blindness in the developing world. *Int Ophthalmol* 1990;14:135-40.
- 2 Thylefors B. Much blindness is avoidable. *World Health Forum* 1991;12:78-86.
- 3 Etya'ale DE. Assessing the needs for the training of ophthalmic manpower in French speaking Africa. MSc Thesis. London: International Centre for Eye Health, 1995.
- 4 Negrel AD, Minassian DC, Avognon Z, et al. *The prevalence and causes of blindness and visual handicap in the Republic of Benin*. Geneva: WHO, 1990.

NOTICES

Primary Eye Care

The latest issue of the *Community Eye Health* (no 26) discusses the importance of primary eye care, particularly in the developing world. For further information please contact *Community Eye Health*, International Centre for Eye Health, Institute of Ophthalmology, 11-43 Bath Street, London EC1V 9EL. (Tel: (+44) 171 608 6910; fax: (+44) 171 250 3207; email: eyeresource@ucl.ac.uk) Annual subscription £25. Free to workers in developing countries.

Residents' Foreign Exchange Programme

Any resident interested in spending a period of up to one month in departments of ophthalmology in the Netherlands, Finland, Ireland, Germany, Denmark, France, Austria, or Portugal should apply to: Mr Robert Acheson, Secretary of the Foreign Exchange Committee, European Board of Ophthalmology, Institute of Ophthalmology, University College Dublin, 60 Eccles Street, Dublin 7, Ireland.

Office of Continuing Medical Education

The 11th Annual Wilmer Institute's Current Concepts in Ophthalmology will be held on 10-12 December 1998 at the Johns Hopkins Medical Institutes. Further details: Program Coordinator, Johns Hopking Medical Institutions, Office of Continuing Medical Education, Turner 20/720 Rutland Avenue, Baltimore, MD 21205, USA. (Tel: (410) 955-2959; fax: (410) 614-8613; email: cmenet@som.adm.jhu.edu)

American Academy of Optometry—Academy '98

The American Academy of Optometry, Academy '98 will be held on 10-14 December 1998 at the San Francisco Hilton and Towers, San Francisco, California, USA. The call for abstracts may be requested at (301) 984-1441 or meetings@aaoptom.org or on the web site www.aaopt.org

7th Rotterdam International Skull Base Day/Essex course

The 7th Rotterdam International Skull Base Day/Essex one day course on orbital and peri-orbital lesions will be held on 23 January 1999. Further details: Mrs K Sipman, PO Box 1738, 3000 DR Rotterdam, Netherlands. (Tel: +31 10 40897787; fax: +31 10 4362762)

Ophthalmic technologies

The 9th Ophthalmic Technology Conference will be held on 23–24 January 1999 during the International SPIE symposium on biomedical optics. Further information: The SPIE Organisation, PO Box, Bellingham, WA 98227-0010, USA. (Fax: (+1) 360-647-1445; email: www.spie.org/info/pw)

Laser eye injuries

A conference on the epidemiology, prevention, diagnosis, and therapy of laser eye injuries will be held in San Jose, California on 25–26 January 1999 during the International SPIE symposium on biomedical optics. Further information: The SPIE Organisation, PO Box, Bellingham, WA 98227-0010, USA. (Fax: (+1) 360-647-1445; email: www.spie.org/info/pw)

Office of Continuing Medical Education

The 21st Annual Wilmer Institute's Current Concepts in Ophthalmology will be held on 4–9 February 1999 at the Hyatt Regency Cerromar Beach Hotel, Dorado, Puerto Rico. Further details: Program Coordinator, Johns Hopkins Medical Institutions, Office of Continuing Medical Education, Turner 20/720 Rutland Avenue, Baltimore, MD 21205, USA. (Tel: (410) 955-2959; fax: (410) 614-8613; email: cmenet@som.adm.jhu.edu)

XVII Asia-Pacific Academy of Ophthalmology Congress

The XVII Asia-Pacific Academy of Ophthalmology Congress will be held in Manila, Philippines on 7–12 March 1999. Its theme is "Ophthalmology in the Asia Pacific Region for the 21st century", the main topics being Cataract, Infection and Inflammation, Glaucoma, and Vitreoretinal disease. Further details: Secretariat, Philippine College of Surgeons'

Building, 3/F, 992 North EDSA, 1105 Quezon City, Metro Manila, Philippines. (Tel: (632) 927-2317 or (632) 925-3789; fax: (632) 924-6550; email: pao@pao.org.ph)

Office of Continuing Medical Education

The 16th Annual Wilmer Institute's Current Concepts in Ophthalmology will be held on 14–19 March 1999 at the Manor Vail Lodge, Vail, Colorado, USA. Further details: Program Coordinator, Johns Hopkins Medical Institutions, Office of Continuing Medical Education, Turner 20/720 Rutland Avenue, Baltimore, MD 21205, USA. (Tel: (410) 955-2959; fax: (410) 614-8613; email: cmenet@som.adm.jhu.edu)

Ophthalmological Clinic, University of Creteil

An international symposium on the macula will be held on 26–27 March 1999 at the Ophthalmological Clinic, University of Creteil. Further details: Professor G Soubrane, Chef de Service, Clinique Ophtalmologique Universitaire de Creteil, Centre Hospitalier Intercommunal, 40 Avenue de Verdun, 94010 Creteil, France. Fax: 01 45 17 52 27.

Leonhard Klein Award 1999

The Leonhard Klein Award 1999, valued at DM30 000, will be given for innovative, scientific works in the field of development and application of microsurgical instruments and microsurgical operating techniques. It can be conferred on an individual as well as a group of researchers. The work must be submitted in either English or German by 31 March 1999. Further details: Stifterverband für die Deutsche Wissenschaft eV, Herrn Peter Beck, Postfach 16 44 60, D-45224 Essen, Germany.

12th Annual Meeting of German Ophthalmic Surgeons

The 12th annual meeting of German Ophthalmic Surgeons will be held on 10–13 June 1999 at the Meistersingerhalle, Nürnberg, Germany. Further details: MCN Medizinische Congress-Organisation Nürnberg GmbH, Weilandstrasse 6, D-90419 Nürnberg, Germany. (Tel: ++49-911-

3931621; fax: ++49-911-3931620; email: doerflinger@mcn-nuernberg.de)

XII Congress European Society of Ophthalmology

The XII Congress European Society of Ophthalmology will be held in Stockholm, Sweden on 27 June–1 July 1999. Further details: Congress (Sweden) AB, PO Box 5819, S-114 86 Stockholm, Sweden. (Tel: +46 8 459 66 00; fax: +46 8 661 91 25; email: soe@congreg.se; <http://www.congreg.com/soe/>)

4th Meeting of the European Neuro-Ophthalmology Society

The 4th meeting of the European Neuro-Ophthalmology Society will be held on 29 August–2 September 1999 in Jerusalem, Israel. Further details: Secretariat, 4th Meeting of the European Neuro-Ophthalmology Society, PO Box 50006, Tel Aviv, 61500, Israel. (Tel: 972-3-514000; fax: 972-3-5175674/972-3-5140077; email: Eunos99@kenes.com)

Ophthalmological Clinic, University of Creteil

An international symposium on the macula will be held on 1–2 October 1999 at the Ophthalmological Clinic, University of Creteil. Further details: Professor G Soubrane, Chef de Service, Clinique Ophtalmologique Universitaire de Creteil, Centre Hospitalier Intercommunal, 40 Avenue de Verdun, 94010 Creteil, France. Fax: 01 45 17 52 27.

Jules François Prize

The 2000 Jules François Prize of \$100 000 for scientific research in ophthalmology will be awarded to a young scientist who has made an important contribution to ophthalmology. All topics in the field of fundamental and/or clinical research in ophthalmology will be considered. The application should be sent jointly with a curriculum vitae, the list of all publications, and three copies of the candidate's 10 most relevant publications to Jules François Foundation Secretary, Professor Dr M Hanssens, Dienst Oogheelkunde, de Pintelaan 185, B-9000 Gent, Belgium. Deadline for applications 31 December 1999.