

HOW RELEVANT IS CURRENT NIGERIAN POSTGRADUATE OPHTHALMIC TRAINING TO NEEDED PRACTICE SKILLS?

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SUMMARY

Objectives

- To determine the pattern of referrals to an ophthalmic department
- To determine the scope of other sub-specialty knowledge required of the practicing ophthalmologist
- To determine the impact of referral pattern on the needed practice skills in ophthalmology.

Method: A study of one hundred consecutive in-patients with visual complaints referred from different departments of the University College Hospital, Ibadan to the ophthalmology department was done. Their age, sex, source of referral, working diagnosis of the referring physician, definitive ocular diagnosis, investigations requested, ophthalmic management and outcome were analyzed.

Results: Forty-eight percent of the subjects studied were aged below 20 years. Almost half of the patients (47%) were referred by neurosurgeons, while physicians had referred 20%, half of whom were from the endocrine unit. Optic atrophy and papilloedema represented 18% and 12% respectively of the ocular findings in the referred patients. Eleven percent of the patients had no discernible ocular abnormality. The investigation most frequently requested by the ophthalmologist was roentgenological examination (25%), followed by ultrasound scan (9%) and visual field analysis (7%). The most frequently prescribed medications by the ophthalmologist were antibiotics and antihistamines (27%). More than half of the patients (57%) did not require any medication but were counseled. Fifty-six percent of the patients had no ocular problem and were therefore discharged. Nine percent lost the vision in one

or both eyes. Eight percent of the patients died while 27% was lost to follow up.

Conclusions: The need for the ophthalmologist to have adequate knowledge of some diseases affecting medical and surgical sub-specialties is emphasized. This study justifies the current postgraduate curriculum of the various colleges that requires rotation through some specialized medical and surgical units by ophthalmology residents. Specifically, knowledge about vision-threatening intracranial space-occupying lesions, head injury and hydrocephalus must be updated. Diagnostic skills for recognition and investigation of optic disc oedema and optic atrophy also need to be reviewed constantly.

Key words: ophthalmic referrals, medical and surgical sub-specialties, curriculum development

INTRODUCTION

Excellence in eye health care requires ophthalmologists to have knowledge and skills not only in the field of ophthalmology, but also in the general medical field. In addition, the practicing ophthalmologist needs to be adequately prepared for the management and leadership roles expected of him/her^{1,2,3}. Recognizing this, the faculties of ophthalmology of both the National postgraduate Medical College (NPMC) of Nigeria² and the West African College of Surgeons (WACS)³ outlined within the training curriculum for residents a three-level training structure including the basic sciences, junior residency, and senior residency. The junior residency programme entails a 24-month

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rotation including 17 months in clinical ophthalmology, 2 months in neurosurgery, one month each in neurology, otorhinolaryngology (ORL), plastic/maxillofacial surgery and endocrinology. In addition, the junior resident is expected to spend 2 weeks in morbid anatomy and another 2 weeks in either microbiology or haematology. Training in community ophthalmology is also encouraged. Suffice to say that the West African Health Community {incorporating the WACS and the West African College of Physicians (WACP)} have also developed a curriculum⁴ for primary eye care trainers (PECT) to boost the training of integrated eye care workers for primary eye care and another for diplomate ophthalmologists (DO) to increase surgical services, especially cataract surgery rates at secondary eye care level.

Currently, however, the programme requires that the trainee (resident ophthalmologist) attend a number of clinics in the various sub-specialties and perform a number of procedures. The aim of this paper is to investigate the necessity of such postings in the postgraduate ophthalmology curriculum against the background of the pattern of referrals to an ophthalmic department.

MATERIALS AND METHOD

One hundred consecutive in-patients referred to the ophthalmologists by other specialists at the University College Hospital, Ibadan, Oyo State, Nigeria, between November 1995 and March 1996, were reviewed. The University College Hospital, Ibadan is a multi-specialist teaching hospital. The demographic data of the patients, source of referral, working diagnosis, definitive ocular diagnosis, investigations requested by the ophthalmologist, treatment given and outcome of ophthalmic management were recorded and analyzed using Epi Info Version 6 statistical package.

RESULTS

The age range was 8 days to 70 years, with a mean age of 25.3 years. The male-female ratio was 3:2. The age and sex distribution of the patients is shown in table 1. The most frequent consults aged under twenty, representing 48% of the total. Only 9% of the patients were above sixty years. The sources of the referrals are shown in table 2. Patients were classified by the diagnosis of the referring specialist (table 3). About half (47%) of the patients were surgical patients referred by neurosurgeons. Space occupying lesions represented 25% of the cases, while sequelae of road traffic accidents and hydrocephalus each had 11%. These three groups alone represented about half of the consults received and were from the neurosurgical unit. A third of the patients had optic disc oedema or its sequel – optic atrophy. Medical patients comprised 20% and about half of these were referred from the endocrinology unit. Of the 14

paediatric patients, more than half were referred from the paediatric emergency unit with Burkitt's lymphoma, febrile convulsion with cortical blindness, and measles encephalopathy. Eleven percent of the patients showed no ocular abnormality. The range of ocular diagnosis as made by the ophthalmologists is presented in table 4.

Table 1. Age and sex distribution of patients

Age Range (years)	Sex		Percentage
	Male	Female	
0-10	25	14	39
11-20	5	4	9
21-30	4	4	8
31-40	9	4	13
41-50	7	6	13
51-60	5	4	9
61-70	5	4	9
Total	60	40	100

Table 2. Source of referral

Source of Referral	No of Patients	Percentage
Neurosurgery	47	47
Medicine	20	20
Paediatrics & CIHW	14	14
General Surgery & Orthopaedics	9	9
ORL	4	4
MFU	2	2
O & G	2	2
RTH	2	2
Total	100	100

Table 3. Diagnosis of referring specialist

A. Departments of Medicine / Psychiatry / Endocrine unit – 20 patients	
Diabetes mellitus	6
Cranial polyneuropathy	2
Cushing's disease	2
Steven – Johnson syndrome	2
Cavernous sinus thrombosis	2
Chronic myeloid leukemia	1
Meningitis	1
Cerebrovascular accident	1
Malignant hypertension with chronic renal failure	1
Systemic lupus erythematosus with pleural effusion	1
Schizophrenia	1
B. Department of General Surgery / Orthopaedic Unit – 9 patients	
Carcinoma of the breast	2
Metastatic prostatic carcinoma	2
Diabetes mellitus with diabetic foot	2
Gall bladder disease	1
Neurofibromatosis	1
Traumatic quadriplegia	1

C. Department of Maxillo-Facial Unit (MFU) – 2 patients	
Facial bone fracture	2
D. Department of ENT – 4 patients	
Maxillary antrum carcinoma	2
Nasopharyngeal carcinoma	2
E. Department of Obstetrics & Gynaecology – 2 patients	
Uncontrolled hypertension in pregnancy	2
F. Department of Paediatrics & Children Emergency Ward (CHEW) — 14 patients	
Febrile convulsion with cortical blindness	5
Burkitt's lymphoma	3
Measles encephalopathy	3
Rhabdomyosarcoma	2
Meningitis	1
G. Neurosurgery Unit (Department of surgery) – 47 patients	
Intracranial space occupying lesion (SOL)	25
Hydrocephalus	11
RTA with bi-hemispheric contusion	11
H. Department of Radiotherapy – 2 patients	
Recurrent retinoblastoma	2

frequent (10%). No medical treatment was needed in 57% of the referrals. These patients were counseled and re-assured. The outcome of ophthalmic treatment is as shown figure 3.

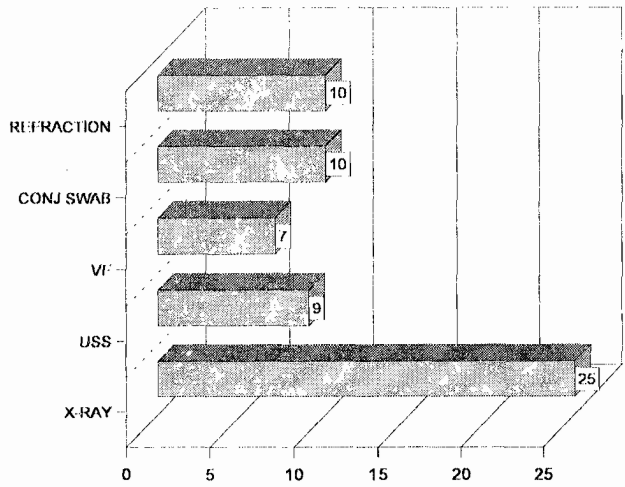


Figure 1. Investigations ordered by the ophthalmologist
VF – Visual field USS – Ultrasonography

Table 4. Range of diagnosis by the ophthalmologist

Optic atrophy	18
Allergic conjunctivitis	13
Papilloedema	12
Healthy eyes (no ocular abnormalities detected)	11
Bacteria conjunctivitis	10
Refractive error	10
Traumatic sub-conjunctival haemorrhage	6
Cortical blindness	5
Ruptured globe	4
Cavernous sinus thrombosis	2
Orbital metastasis	2
Orbital retinoblastoma	2
Panophthalmitis	2
Grade IV hypertensive retinopathy	1
Oculomotor nerve palsy	1
Orbital neurofibromatosis	1

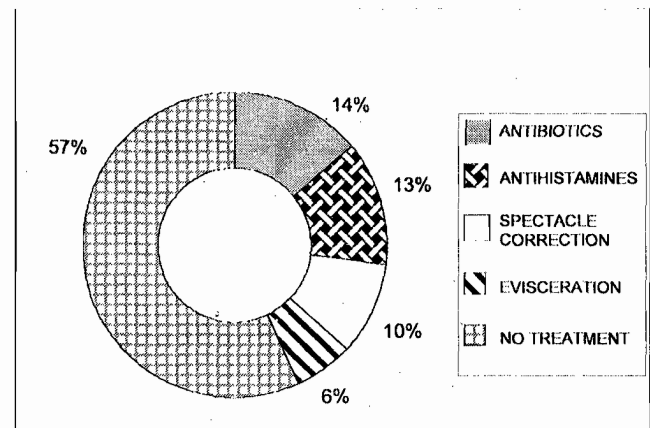


Figure 2. Range of treatment offered.

Clinical Investigation and Treatment

No additional investigation was ordered for 39% of the patients. The investigations ordered for the rest of the patients (61%) are shown in figure 1. Roentgenological investigations were requested most frequently (25%). Ultrasound scan and visual field were requested for 9% and 7% of the patients respectively. Conjunctival swab for microscopy culture and sensitivity was requested in 10% while optical refraction was required in another 10% of the patients. The wide range of treatments was used (figure 2). The most common treatment was topical antibiotics and antihistamines, prescribed in 27% of the referrals. Prescription of spectacles was the next most

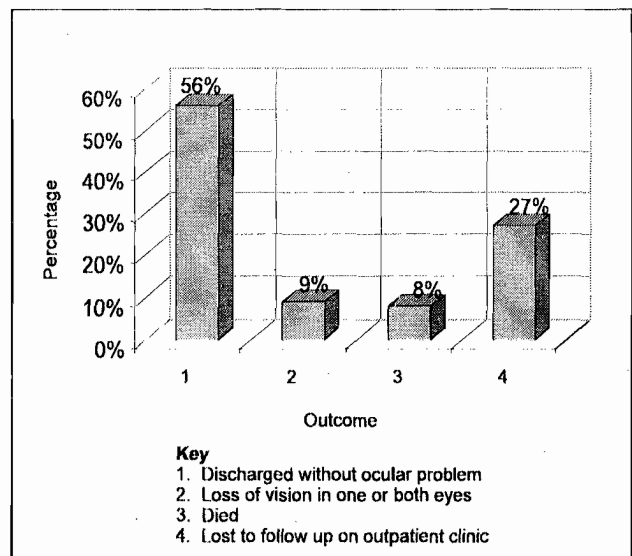


Figure 3. Outcome of ophthalmic management

Fifty-six percent of the patients had no ocular problems and were discharged. Nine percent of the patients lost vision in one or both eyes and 8% died. Twenty-seven percent were, however, lost to follow-up.

DISCUSSION

Medical education (including ophthalmology) emphasizes the acquisition of knowledge, skills, attitudes and behaviour appropriate for 21st century medicine. The range of general medical problems about which an ophthalmologist needs to have knowledge seems to be infinite.⁵ Ocular problems can be seen in some patients who have a systemic disease.⁵ In diabetes, hypertension, leprosy, and hydrocephalus for instance, patients often have ocular symptoms resulting from their systemic disease. Patients may also present at the time of a systemic illness, with unrelated eye disorders which may predate the current illness or which appeared about the same time. These patients often require the attention of an ophthalmologist. In practice, however, it is very difficult, and probably impossible, to remain familiar with information on such a wide range of systemic diseases, while also keeping abreast of all the latest developments in the field of ophthalmology.

The wide age range showed the diversity of patients in the study. Almost half of the patients were under the age of twenty years (48%) and 39% of them were under 10 years, signifying more paediatric referrals and possibly the need for a dedicated paediatric ophthalmology unit in our various ophthalmology departments. Since general ophthalmic practice usually deals more with elderly patients,^{6,7,8,9,10,13} this difference is noteworthy. Nearly 10% of the patients lost the vision in one or both eyes. This is probably a reflection of the fact that members of the study group have serious eye problems.

CONCLUSION

In conclusion, the ophthalmologist needs to have at least a basic knowledge^{5, 11} of some medical and surgical subspecialties like otorhinolaryngology (ORL), neurosurgery, endocrinology and paediatric emergency. The results of this study underscore the importance of the mandatory clinical rotations in these subspecialties as a prerequisite to sitting for the postgraduate colleges' fellowship examination and moving to the senior residency level. Specifically, knowledge about vision-threatening intracranial space-occupying lesions, head injury and hydrocephalus must be updated. Diagnostic skills for recognition and investigation of optic disc oedema and optic atrophy also need to be reviewed constantly.

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References

1. Ogundipe OO. Does the training of ophthalmologists in Nigeria meet the challenges of private practice? *Nig J Ophthalmol* 1999; 7: 18-20.
2. *Residency Training Programme in Ophthalmology – A handbook for residents and their teachers*. Revised 2002. National Postgraduate Medical College of Nigeria.
3. *Residency Training Programme in Ophthalmology – A handbook for residents and their teachers*. Revised 2003. West African College of Surgeons.
4. Odusote KA. Human resources development for the prevention of blindness in anglophone West Africa. *West Afr J Med* 1998; 17: 1-8.
5. Bibliography. Current world literature. Ocular manifestations of systemic diseases. *Curr Opin Ophthalmol* 2002; 13(6): 431-2.
6. Wang YD, Thompson JR, Goulstine DB, Rosenthal AR. A survey of the initial referral of children to an ophthalmology department. *Br J Ophthalmol* 1990; 74: 650-3.
7. Onwasigwe EN, Umeh RF, Onwasigwe CN, Aniebue PN. Referral pattern of children to the eye department of the University of Nigeria Teaching Hospital, Enugu, Nigeria. *Nig J Ophthalmol* 1996; 4(1): 5-6.
8. Bhopal RS, Parkin DW, Gillie RF, Han KH. Pattern of ophthalmological accidents and emergencies presenting to hospitals. *J Epidemiol Community Health* 1993; 47: 382-7.
9. Kheterpal S, Perry ME, McDonnell PJ. General practice referral letters to a regional ophthalmic accident and emergency department. *Eye* 1995; 96(Suppl): 67-9.
10. Vernon SA. Analysis of all new cases seen in a busy regional centre ophthalmic casualty department during a 24-week period. *J R Soc Med* 1983; 76: 279-82.
11. Shuttleworth GN, Marsh GW. How effective is undergraduate and postgraduate teaching in ophthalmology? *Eye* 1997; 11: 744-50.
12. Claoué CM. Requirements and characteristics of 500 consecutive patients consulting an ophthalmic medical practitioner. *J R Soc Med* 1988; 8: 394-6.
13. Claoué C, Foss A, Daniel R, Cooling B. Why are new patients coming to the eye clinic? An analysis of the relative frequencies of ophthalmic disease amongst new patients attending hospital eye clinics in two separate locations. *Eye* 1997; 11: 865-8.