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OPHTHALMOLOGY IN LAGOS, 1943

BY

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COLONIAL MEDICAL SERVICE

THE Eye Clinic in the African Hospital, Lagos, was opened on December 7, 1942, and its inception was made possible when I became available for service in Nigeria as I had the necessary qualification, but what is more important I had the time to devote to such a clinic. The war had so brought it about that I was posted to Nigeria and on my arrival in November, 1942, I was asked to take the teaching of anatomy in the Medical School (a part-time post) and to run an eye clinic to fill up the remainder of my daily routine time-table. Before the date of my arrival, there had been no eye clinic as a separate entity in the out-patient department, and any ophthalmic patients who attended were seen in the ordinary way by that Assistant Medical Officer (African) who happened to get the case. If any difficulties arose, the patient was referred to one or other of the European staff, but no one of the staff had devoted any great amount of attention to the study of ophthalmology and these cases were seen in the ordinary course of their routine work. Some few years ago, the Senior Medical Officer then stationed at Lagos had been interested in ophthalmology, and he devoted considerable time to it, but this was very much of a side line, and he has informed me that he saw only those cases which were referred to him by other members of the

Medical Department, and that he did not run an eye clinic which was open to all who cared to apply directly to it for attention.

As a result of all this the accommodation, which had been reasonably adequate for what was required of it in time gone past, had been taken over for other activities in the hospital, and the equipment, which had at no time been adequate, had to a large extent perished from disuse or had been transferred to other stations in the country where more or better use might be made of it. The impossibility of obtaining fresh equipment has made the present position extremely difficult and the supply of drugs necessary for a thriving Eye Clinic has been quite inadequate through no fault of anyone connected with such supplies, but merely because abnormal demands have been made upon the normal supply.

Staff for the proposed Eye Clinic was provided in the shape of a part-time nurse, but it soon became obvious that this was quite inadequate, and the work could not have gone on if some voluntary help had not become available soon after the clinic was opened.

Almost all the patients seen in the clinic have been African, and the number of Europeans who have had attention has been so small that their inclusion in the figures does not vitiate the results when these are taken as a survey of ophthalmic conditions in West Africa; most of the Europeans attended for correction of refractive errors and only about four have attended for pathological conditions and in the following comments these will usually be ignored.

During December, 1942, the cases attending were to a large extent referred from the out-patient department, or from the school clinic, but very soon the general population of Lagos and district learned of the existence of the Eye Clinic and patients began to appear of their own accord, coming direct to the Clinic.

In view of the small part of my time which the Clinic was expected to occupy, arrangements were made to hold it in the late afternoons, but by early January, 1943, the increase in numbers had been so great that re-organisation was necessary, and from that time onwards, the Clinic was held daily in the mornings and was considered to be the major and by far the most important part of my official daily duties, while the teaching of anatomy became very much a part-time effort and preparation of the anatomy lectures, dissections, etc., had perforce to be done in what should have been my spare time, in the evenings.

From January onwards the numbers have progressively increased, and by the end of February, there was so much to be done that less essential work had to be curtailed, and the decision was made that routine refractions in school children would have

to be postponed until more trained assistance became available. The reason behind this was that the supply of spectacles in West Africa was quite unequal to the demands which might be made upon it and there was no hope whatever of obtaining supplies for the mass of school children who required spectacles. Only those cases in which the child's health was being seriously interfered with were considered, and further, most of the routine work among the school children had to be returned to the school clinic.

The annual report of the Eye Clinic has been submitted to the Director of Medical Services in the form desired by the Department (Table I) and will, no doubt, appear in due course in the

TABLE I

Figures for ophthalmic outpatients for 1941, 1942 and 1943, according to the reports submitted officially to the Director of Medical Services.

	1941	1942	1943
(a) Cataract	19	27	94
(b) Conjunctivitis	423	1,123	452
(c) Ectropion, Entropion ...	Nil	Nil	12
(d) Refractive Errors	Nil	Nil	852
(e) Glaucoma	Nil	1	72
(f) Iritis	2	1	18
(g) Keratitis	6	5	64
(h) Pterygium	2	3	46
(i) Trachoma	2	6	91
(j) Ulcer of cornea, Staphyloma, Leukoma	8	28	94
(k) Others	39	182	1,410
	501	1,376*	3,205

* This total includes 160 cases seen by myself in the Eye Clinic during December, 1942.

Colonial Office Medical Reports, but as it gives very little information of ophthalmological value, further details are now submitted for publication. For the sake of comparison the figures for 1941-42 have been extracted from previous annual reports, and have been placed beside the figures for 1943. An abnormal increase in the figures for 1942 occurred from July onwards, and this suggests that someone had been attached to the hospital who was taking more interest in ophthalmology than had been done before.

In compiling these figures for 1943 no patient has been counted twice, so that the figures merely represent the number of patients seen, and not the number of conditions which were diagnosed. In every case, the primary disease, so far as could be ascertained, has been listed, and any other subsidiary condition which might have been discovered during examination has not been entered in the figures, not even recurrences have been entered, but the comments following the reclassification will amplify these.

TABLE II

Classification of Patients attending in 1943

				Totals	Per cent.
A	Diseases of the Lids ...	Meibomian Cyst ...	32		
		Hordeolum ...	72		
		Others ...	15	119	4
B	Diseases of Lachrymal Apparatus ...	Dacryocystitis ...	5		
		Others ...	5	10	—
C	Diseases of Conjunctiva ...	Conjunctivitis ...	452		
		Spring Catarrh ...	12		
		Trachoma and all its results ...	91		
		Pterygium ...	46		
		Others ...	1	602	19
D	Diseases of the Cornea ...	Keratitis ...	64		
		Ulcer ...	39		
		Late results of both ...	55		
		Others ...	1	159	5
E	Diseases of the Sclera ...	Episcleritis ...	33		
		Others ...	2	35	1
F	Diseases of the Uvea ...	Iritis ...	18		
		Cyclitis ...	123		
		Choroiditis ...	25		
		Late results of all three ...	15	181	6
G	Diseases of the Lens ...	Cataract, Senile ...	85		
		Congenital ...	7		
		Others ...	2	94	3
H	Diseases of the Retina ...	Retinitis ...	1		
		Glioma ...	2	3	—
J	Diseases of the Optic Nerve ...	Neuritis ...	2		
		Atrophy ...	2	4	—
K	Diseases of Tenon's Capsule...	Tenonitis ...	2	2	—
L	Diseases of Orbital Tissues ...	Tumours ...	1		
		Cellulitis ...	6	7	—
M	Unclassified States of the Eye	Glaucoma, acute ...	2		
		chronic ...	70		
		Panophthalmitis ...	4		
		Others ...	4	80	3
		Arteriosclerosis ...	3	3	—
N	Vascular States ...	Whooping Cough ...	7		
O	Systemic Diseases ...	Syphilis ...	16		
		Migraine ...	2		
		Others ...	19	44	1
P	Diet Deficiency Diseases ...	Hypo-vitaminosis ...	518	518	16
Q	Parasitic Diseases ...	Loa Loa ...	10		
		Onchocerciasis ...	4	14	—
R	Injuries ...	F. B. Cornea ...	113		
		Accidental ...	201		
		Assault ...	49	363	11
S	Errors of Refraction ...	Hypermetropia ...	107		
		Myopia ...	223		
		Presbyopia ...	334		
		Astigmatism ...	142		
		Others (mostly amblyopia and asthenopia) ...	46	852	26
T	Muscle Imbalance ...	Squints ...	4	4	—
U	Routine Examinations ...	School Children ...	37		
		Government Servants ...	36		
		Members of H.M.F. ...	10	83	2
V	Defaulted before examination completed, or not in above classification ...		28		1

It will be obvious to those acquainted with ophthalmology that the mass of patients classified in 1941 and 1942 as suffering from conjunctivitis must have included all that conglomerate group of cases in which a congested red eye was the predominating sign. Similarly in 1943 the huge number under "Others" is much too large to be passed over without further dissection and it is primarily for this reason that the following presentation is made. Table II shows an amended classification of the 3,205 patients, so as to convey some information of value to ophthalmologists, and to those who might be interested in Ophthalmological work in West Africa. The percentages have been calculated to the nearest round figure, but in these cases where it is very small, no percentage has been entered.

Many of the patients are quite uneducated, are so poor and live in such unsuitable surroundings that they are unable to carry out even the simplest treatment. Many of them were quite incapable even of applying drops to the eye. Wherever possible, these patients were brought back to the clinic for daily attention, and frequently the dressings which were performed in the Clinic were the only attention that the pathological states received. This all increased the work to be done in the Clinic and by the end of the year well over 20,000 attendances had been given.

In addition to the regular clinic a separate session has been held once a week at which all candidates for posts in Government service were examined. No careful tally of these was kept, but taking individual weeks scattered throughout the year as average samples, the number is computed to be just over 2,000.

Comments on Table II

B. *Diseases of the lachrymal apparatus.* Dacryocystitis.—Four of these cases were in children between the ages of 10 and 16, and all of them had concomitant septic nasal conditions. In two cases which came to operation, there was obvious extension from the anterior ethmoidal sinus. The conjunctival sac seemed above suspicion and there was no history of conjunctivitis.

C. *Diseases of the conjunctiva.* Conjunctivitis.—A half-hearted attempt has been made to find the exact bacteriological flora in cases of conjunctivitis, but shortage of staff, both in the Eye Clinic and particularly in the Pathological Department has made the result unsatisfactory, and no figures can be quoted at present for the various organisms which might be found in conjunctivitis. In many cases secondary infection by staphylococcus was found, and this swamped the primary causative organisms. It has been remarkable, however, that in only a very few instances has the diplobacillus of Morax-Axenfeld been discovered, and it is quite rare to find a Koch-Weeks infection, either clinically or bacteriologically.

Spring Catarrh.—Spring catarrh has been seen affecting the lids in only two cases. In the remainder it has been the limbal type, and in one or two cases it was so gross as to cause difficulty in diagnosis.

Trachoma.—The number of trachoma cases was sufficient to warrant having a special session for trachoma treatment to avoid risk of conveying the disease to other patients in the clinic, and also to enable these trachoma patients to continue their treatment while following their normal occupation. This session is held in the late afternoon so that patients may attend either on their way from work or after they have had their afternoon meal. It is rare to find patients with the early stages of trachoma, and most of these suffer from secondary infection. The majority of the patients come for treatment of exacerbations of the acute stage. Quite a few presented themselves with a well established pannus, which had spread over most of the cornea, and it was not unusual to find entropion, even up to extreme degrees, which shows that trachoma must be more common in Southern Nigeria than figures for the active condition indicate.

Pterygium.—Pterygium is an extremely common condition in Lagos, but it has been easily amenable to simple operations for its cure, and in only one patient has a recurrence taken place and this occurred three times after various operations. It was found, however, that the patient himself had brought about the recurrence because he admitted later that he had been giving the eye massage through the lids on each occasion immediately following the removal of the stitches in an attempt to reduce the swollen nodule and to hasten the improvement in the appearance of the eye. This forced out the flap from its final position, and left the way clear for the pterygium to extend forward over the cornea again.

D. Diseases of the cornea. Keratitis.—Many types of keratitis have been seen in the clinic, but not a single case of syphilitic interstitial keratitis has been found, and this in spite of the high incidence of venereal infections reported among the general out-patients and in the venereal clinic.

Ulcer.—Most of the ulcers have been of the simple staphylococcal type, very rarely perforating, and have usually caused no great trouble in treatment. It has been remarkable that only two cases of dendritic ulcer have been seen, and these were both in Europeans. Not a single case has been seen in Africans. Limbal ulcer is fairly common, and has proved to be extremely stubborn.

Late results of both.—A considerable number of patients presented themselves with leucomata, most of which were deep seated in the cornea, and quite a fair number had an iris incarceration in the scar. Although nothing could be done to cure the condition, many of these patients have asked to have something done

to hide the intensely white scar on the front of the eye, which is normally almost black in appearance (even the sclera is definitely tinged with dark brown pigment). These leucomata lent themselves to tattooing, but unfortunately the supply of suitable agents for tattooing was very small and was soon exhausted and no further supplies have been forthcoming owing to the war. The results of tattooing using gold chloride were satisfactory, but at times the stain was not dark enough to match the very dark African eye.

F. *Diseases of the uvea.* Iritis.—Frank, simple iritis is not at all common as a primary condition, but a few cases do occur and occasionally patients presented themselves with all the late signs and sequelae of previous severe attacks of iritis. Pigment deposits on the anterior lens surface are not uncommon, but my impression is that posterior synechiae are not nearly so common as in European countries, and this in spite of the frequency of corneal ulcers.

Cyclitis.—This is by far the most common affection of the uveal tract. It usually is of a mild type, and affects only a small section at a time, but it tends to be recurrent and eventually affects most of the ciliary body. Individual attacks, although mild, are very stubborn; they rarely clear up without vigorous treatment with atropine, and a pad and bandage have been found almost essential. If the pad is not applied the case runs a more prolonged course.

Choroiditis.—The number of these cases as shown in the tabulated list is far too small to give an indication of the actual number of cases which have been found to be suffering from choroiditis. Few patients come complaining of the choroiditis, and many cases have been discovered during the routine fundus examination of eyes with errors of refraction, and as the patient's primary complaint has been dimness of vision due to refractive error, these cases in which choroiditis has been discovered have not been listed as choroiditis unless refractive error was negligible, and the choroiditis was obviously the main cause of disability. This comment also applies to several other conditions such as cyclitic exudates and minor lens changes, because it must be borne in mind that the figures given in Table II are a record of the patients seen, and not of the separate pathological conditions which have been discovered during investigation.

Late results of all three.—Further evidence that cyclitis is the principal affection of the uveal tract in Lagos is found in this group, where fine deposits are frequently found on the posterior surface of the lens. In some cases the exudate has gone on to a complete cyclitic membrane so as to interfere seriously with visual acuity. During routine ophthalmoscopic examinations, it is not uncommon to find small scattered deposits on the posterior

lens surface especially towards the periphery, and these interfere only slightly with vision—the main disability arises from the involvement of the ciliary body itself.

G. *Diseases of the lens.* Cataract.—A fair number of ~~typical~~ bilateral senile cataracts have presented themselves, but there has been a striking proportion of uni-lateral well established cataracts in patients aged 30 years, and upwards. None of these patients give any history of injury, and it is very rare even to find a history of previous inflammatory infection. The iris is almost invariably quite free and the cataract has always the appearance of a simple senile cataract. This unilateral type occurs at a much earlier age than in Europe, and it appears to progress very much more slowly, because the history of diminution of vision in these cases extends over many years, and it is unusual to find any of these cataracts presenting a fully mature appearance. Very few of them have been sufficiently advanced to warrant operation, and the mentality of the patient usually is such that he is unwilling to undergo an operation for the removal of the cataract, unless a promise can be made that good vision will be restored and the eye be brought into full use in conjunction with its normal fellow. Without having any scientific grounds for the statement, it appears to me that this condition may be closely related to deficiency of diet which is extremely common in this country.

H. *Diseases of the retina.* Retinitis.—It is most remarkable that not a single case of retinitis of diabetic or of nephritic origin has presented itself during the whole year, and in no single case was any evidence of these types of retinitis found in the routine examination of other cases. It is difficult to suggest that diabetes and nephritis are not common conditions in this country, where the general state of health is frequently remarkably low, but it is quite possible that the general level of what the African considers good health is so low that the added burden of diabetes or nephritis counts for little, and is not worthy of consideration. Or it may be that since normally neither diabetes nor chronic nephritis causes any constant outward signs which are easily recognised, the patient's attention is not drawn to the systemic disturbance. (Reference to the annual report of the Medical Department of Nigeria will show the tremendous incidence of malaria, sleeping sickness, helminthiasis and many other debilitating tropical diseases.) However, in spite of this, I consider that at least a few might have come complaining of diminution of vision arising from retinitis, but in no single case have exudates or haemorrhages been discovered.

J. *Diseases of the optic nerve.* Neuritis.—This is very much in keeping with the state of affairs found in retinitis. No case of papilloedema or frank optic neuritis has presented itself.

Atrophy.—This is an extremely common condition and it would appear to arise without previous papillitis. The causes are varied, but I consider that the great majority are due to avitaminosis. All stages of this condition have been found, from those which show only very slight pallor of the temporal segment of the disc, up to almost complete optic atrophy, with only a tiny nasal segment remaining unaffected and even that is pale in colour. All these cases, however, are classified under dietary deficiency, and only those cases which are considered to be primary optic atrophy (initial cause not discovered) are entered under this heading. A few cases were seen in which the optic atrophy was extremely suggestive of tabes, but it has been rare to find the results of the Kahn Test positive and facilities for doing a cerebro-spinal fluid examination are not adequate, so that this has never been carried out in connection with work in the Eye Clinic. Both the laboratory staff and the physician are much too busy in their own spheres to be asked to carry out examinations of these patients in whom ultimate diagnosis is primarily of academic interest as the atrophy has usually proceeded to such an extent that no amelioration of the condition can be expected or even hoped for.

M. Unclassified states of the eye. Glaucoma, acute.—Only one case of acute congestive glaucoma in an African has been discovered, and that was an acute congestive attack super-imposed on a very well established long standing chronic glaucoma. The other case was in a Chinaman who arrived as the member of the crew of a ship calling at the port.

Glaucoma, chronic.—Unfortunately, this is a comparatively common complaint, and still more unfortunately the African often tolerates serious interference with his vision before he seeks relief, so that most of these patients come when the disease has been fully established, when the fields of vision have contracted to a small circle of 10-20 deg., and when the degeneration of the optic nerve has progressed so far that there is no hope of improvement. Most of the cases are in comparatively young people, starting at the age of 20 years, and reaching its maximum around 35 years. The course of the condition is usually a steady deterioration after the patient comes to the Eye Clinic, and as a number of the patients refuse operative treatment to begin with, the rate of progress is all too easily seen, and consent for operation comes when it is of little use. While no definite cause of glaucoma has yet been established, the influence of the mental state of the patient has always appeared to me to have some bearing on the condition. The more worrying the patient is in type and the more he is subjected to mental stress, the more progressive is the glaucoma. The African is often childish to a high degree, but he has lost the child's sense of complete abandon, so that he is beset eternally with a multitude

of worries and anxieties. As soon as he achieves even a moderate degree of education, he realises his other shortcomings and his incapacity to maintain a position which he would like to hold. This leads to a continual striving which is both ineffectual and ineffective, and of this he is fairly conscious, and so he lives under considerable mental stress. Among the females the primary worry is connected with matrimonial affairs and relationships, and this pervades their whole life from late girlhood since few of them have achieved any great degree of enlightenment.

O. *Systemic diseases.* Syphilis.—Although syphilis is considered to be a very common disease in the general population, its signs and symptoms in ophthalmological practice are comparatively uncommon. Even in those cases in which the signs are suggestive, a Kahn test often proves negative, and this is all the more remarkable since Yaws is a very common condition and frequently leads to mistaken diagnosis where too much reliance is placed upon the laboratory examination.

P. *Diet deficiency diseases.* Dietary deficiencies are many and varied in this country. In the southern part of Nigeria, the ordinary diet of the people is predominantly carbohydrate and comparatively small quantities of green vegetables and extremely small portions of protein are consumed. All the staple articles of diet which are preferred by these people are extremely poor in all the vitamins, with the exception of A, which is consumed in large quantities in the form of palm oil, ground nuts and their oil. Signs of Vitamin B deficiency are very common but usually take the form of cheilosis and other skin manifestations and the signs of lack of riboflavin as described by Sydenstricker are very rare here. I have seen only one case—a well established one in an old man of 60 years—and the patient made an excellent and rapid temporary recovery under treatment with a small quantity of riboflavin that had become available but the condition recurred when supplies ran out and it was some little time before improvement was brought about by yeast. Very commonly among the Africans there is a crescent of gray haze around the upper limb tapering off at 10 and 2 o'clock and extending on to the cornea for a variable distance—sometimes as much as 2.5 mm. and at times appearing also as a small crescent on the lower cornea from 7 to 5 o'clock. Recently I have become inclined to consider this a possible sign of chronic deficiency of riboflavin. Owing to the lack of a slit-lamp in Nigeria the exact nature of this haze has not been investigated but it seems to me that it is possibly a chronic and less acute stage of the condition described by Sydenstricker. Some discussion on the intra-ocular signs of ariboflavinosis has already taken place in a previous report by Fitzgerald Moore, but I personally rather look upon the cause

of these signs with some doubt, and am of the opinion that the condition of optic atrophy associated with avitaminosis is much more likely to be due to a deficiency in vitamin B1. On this question a separate paper is under preparation; the main symptoms are, extremely slow and deliberate reading of the test type, the patient obviously concentrating on individual letters each one at a time but eventually reaching 6/12 or even 6/9, dimness of vision in bright sunlight, and fatigue when working in artificial light; the outstanding characteristic is an optic atrophy which may present itself in any degree from a slight pallor of the temporal segment, up to an almost complete pale disc with only a small remaining pink nasal segment. The pallor is never so intense or complete as in tabetic discs, or in those of primary optic atrophy, and it is usually accompanied by changes at the macula.

Q. Parasitic diseases. Onchocerciasis.—Four cases have been listed under this heading, but I feel very considerable doubt as to the correctness of the diagnosis, which was come to by exclusion rather than by positive reading of the signs and epiphenomena (Manson-Bahr, 11th Edition, Page 786) which can be due to a variety of other more common diseases.

R. Injuries. Foreign bodies of cornea.—There is very little industry in the country, and the foreign bodies have all been of a comparatively simple nature, such as emery or iron particles from grinding wheels. Most of the working classes are employed as mercantile assistants, petty traders, porters, labourers and in carrying out minor repairs to ships entering the port. The only large workshops maintained are those of the Public Works, the Marine and the Railway Departments of the Civil Government, and in these workshops considerable engineering processes are taken in hand, but the total number of people employed is comparatively small. No protective goggles are worn, and in a few cases where attempts have been made to introduce them, the African has been rebellious and has refused to employ them.

Accidental.—This heading includes all accidental injuries, other than foreign bodies of the cornea. Intra-ocular foreign bodies are extremely rare and no new case has presented itself during the year. Only two patients with late results have been seen and in these the eye has been destroyed. Many of the accidental injuries are minor and arise from the general carelessness, irresponsibility and lack of appreciation of danger in the ordinary activities of everyday life.

Assault.—These are chiefly simple black eyes, subconjunctival haemorrhages, etc., but in a few instances where the assault has been more severe, usually from a blow with a fist on the eye ball, the choroid has been ruptured, and usually close to the macula so that macular vision has been seriously interfered with or even destroyed.

S. Errors of refraction.—The figures given under the various sub-headings indicate the predominating error of refraction found in each patient. It is obvious that many cases have arisen in which a double diagnosis could be made, *e.g.*, myopia with astigmatism, or hypermetropia with astigmatism, etc., etc. In each case only one diagnosis has been entered, and that has been decided by personal choice as being that moiety which was causing the greatest discomfort to the patient, or which was the greater when measured in dioptries. Quite a few patients complained of dimness of vision merely with a view to having glasses prescribed—they thought that glasses gave them an educated appearance—and one man was quite upset and returned to the clinic to complain when he found his glasses failed to confer upon him not only the ability to see clearly but also the power to read and to understand English. Many others, when they find that they are disqualified from entering certain branches of the public service, *e.g.*, police and railway traffic, because of the necessity of wearing glasses to reach the standard of vision required, have been disillusioned and extremely disappointed that “European Magic” or “White man’s juju” has not yet produced a cure for refractive errors which would allow them to enter the service without glasses. Such is their faith in the European, especially in one who commonly goes by the title “The Eye Specialist.” To him nothing concerning the eye should be impossible.

As mentioned under “Choroiditis” many different pathological conditions have been found during the routine examination of cases attending for correction of refractive errors; and I saw many patients complaining only of diminution of vision to whom the primary cause of their failing sight was of no interest or importance. All they wished was to have their sight improved—by glasses if possible. Of these conditions choroiditis in its later stages, and macular degeneration have been outstandingly common. Both these occur frequently in adolescents and the macular degeneration presents itself in all stages from a fine delicate stippling up to pigmentary masses obliterating the macula. Further investigation of both these conditions is urgently required.

T. Muscle imbalance.—It is most remarkable that only one case of strabismus presented himself in the 3,205 cases who attended the Clinic, but it is also remarkable that the incidence of strabismus is very much lower among the general population than in Europe. It is very, very rare in children, and the few cases which have been met occurred in eyes which had suffered some catastrophe resulting in diminished vision of such an extent that the eye had become almost useless and it usually diverged.

U. Routine examination. Government servants.—The number given here represents only that very small number of people

referred specially by their various departments because of inability to perform their work, in whom no abnormal condition was found. Among the candidates for Government appointments no single case of colour blindness has been discovered, although quite a number are ignorant of the names of colours, but are able to pass the tests after having a week's instruction on the English names. The examination of each candidate consists of inspection of the eye for signs of present or previous diseases, estimation of the amount of distance and of near vision by reading test types with each eye separately and the ability to distinguish the simple primary colours; no ophthalmoscopic examination could be attempted in the time available.

Appendix I—Operative Work

This had had to be curtailed within the limits permitted by the very meagre equipment which was able to be collected. Reference has already been made to this difficulty in the introductory paragraph, so no further comments need be made. The following is a brief statement of the various operations undertaken:—

TABLE III.—*Eye Operations, 1943*

Foreign Bodies, Removal of	...	...	...	61
Plastic on lids, chiefly for entropion	...	...	...	12
Curettage of lids, for trachoma	...	...	...	5
Cysts and Styés of lids	...	...	...	20
Diathermy for trichiasis	...	...	...	15
Pterygium, relief of	...	...	...	33
Cauterisation of ulcer corneae	...	...	...	12
Tattoo of leucoma	...	...	...	13
Staphylomata, reinforcement of	...	...	...	3
Iridectomy	...	...	...	5
Cataract, needling or extraction	...	...	...	25
Evisceration	...	...	...	8
Enucleation	...	...	...	1
Posterior sclerotomy	...	...	...	4
Iridencleisis	...	...	...	12
Removal of Filaria	...	...	...	6
Muscle advancement	...	...	...	1

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