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COMMUNICATIONS

REPORT ON OPHTHALMIC CASES IN CAIRO AND ALEXANDRIA

BY

H. L. EASON, C.M.G.

LIEUT.-COL., R.A.M.C.

I HAVE the honour to submit herewith a statistical report of the ophthalmic cases seen in British hospitals in Cairo and Alexandria from January 1st to June 30th, 1916, together with some general remarks upon the ophthalmic practice as a whole. As I have seen cases only in the capacity of a consultant, I have not entered into details of particular diseases or cases; but since my experience has been over a wider area than that of any single ophthalmic surgeon in Egypt, my general impressions may be of some slight interest.

I have confined myself to a brief survey of the common or more interesting affections. These statistics do not include cases seen in districts other than Cairo or Alexandria (with the exception of some cases examined by myself on various occasions in outlying camps), as owing to changes in personnel or in actual hospital units, continuous records have been difficult to obtain. Nor, in addition, can they be considered as entirely exhaustive for the conditions named, as a certain number of cases have not been reported and the records of others have gone astray; still, such as they are, they afford a fairly accurate picture of the ophthalmic work in Egypt during the last six months.

Statistical Analysis of Ophthalmic Cases seen in Cairo and Alexandria, January-June, 1916

CASES.	No. 15. General Hospital, Alexandria.	No. 17. General Hospital, Alexandria.	No. 19. General Hospital, Alexandria.	No. 21. General Hospital, Alexandria.	Citadel and Nasrieh Hospitals, Cairo.	No. 27. General Hospital, Abbassieh.	Wady Mattrun Fayoum, etc.	Total.
Errors of refraction :								
Myopia	100	128	15	18	116	33	44	454
Myopic astigmatism...	142	120	29	42	70	27	24	454
Hypermetropia	86	195	26	54	66	36	29	492
Hypermetropic astigmatism	106	168	35	89	57	29	22	506
Mixed astigmatism	47	72	7	19	14	42	6	207
Presbyopia	98	27	17	13	41	27	1	224
Squint... ..	27	81	9	1	21	4	22	165
Amblyopia in one eye ...	—	89	3	2	54	—	33	181
Injuries of the eye :								
G.S.W., enucleation	—	—	—	10	1	—	—	11
„ previously enucleated	7	3	—	1	4	8	—	23
„ totally blind	1	—	—	—	—	—	—	1
Traumatic conjunctivitis ...	1	—	1	1	—	—	—	3
Perforating wound of globe	—	1	2	2	1	—	—	6
Foreign body on cornea ...	14	13	2	11	2	6	—	48
Traumatic coloboma of iris...	1	—	—	—	—	—	—	1
Irido-dialysis	—	1	—	—	—	—	—	1
Foreign body in lens	—	1	—	—	—	—	—	1
Traumatic cataract	10	3	2	2	—	—	1	18
Retinal and vitreous hæmorrhage	3	1	—	1	—	—	—	5
Ruptured choroid	—	5	1	—	—	—	1	7
Dislocated lens	—	4	1	1	3	—	3	12
Wound of orbit	—	—	2	—	—	—	—	2
Diseases of the Eye :								
Conjunctivitis	73	132	22	22	227	54	25	555
„ (angular)	17	84	18	—	4	—	8	131
Corneal nebula	44	64	3	4	26	10	6	157
Corneal ulcer	17	60	4	8	30	11	—	130
Choroido-retinitis	13	13	—	1	6	8	1	42
Macular choroiditis	—	15	—	—	2	—	—	17
Trachoma	8	7	2	3	8	—	—	28
“ Shell shock ”	2	1	2	—	—	—	—	5
Night-blindness	3	7	—	1	11	—	—	22
Nystagmus	7	19	—	1	7	1	7	42
Other affections	228	319	49	43	171	44	122	976
No appreciable disease ...	167	371	75	41	157	40	32	883
Total	1,222	2,004	327	391	1,099	380	387	5,810

1. Ophthalmic surgery in Egypt from October until June, 1916, has been of a very limited character, confined almost entirely to the excision of a few blind or hopelessly damaged eyes. This limitation has been due to the fact that in Egypt itself there has been comparatively little fighting, and that the centres of military

activity, the Gallipoli Peninsula, Salonica, and Mesopotamia, have been so far distant that cases have seldom arrived in Egypt sooner than a week after the wound has been received. In view of this fact, and of the urgency of treatment in cases of ocular injury (for it is practically useless to attempt to save an injured eye later than 48 hours after the original wound), it was early arranged that, for the Gallipoli Peninsula, as far as naval and military exigencies permitted, all cases of injury to the eye in which any sight remained should be put ashore at Mudros, only a few hours away, where they could be under the care of Major F. Lockhart Gibson, of the 3rd Australian General Hospital. Major Lockhart Gibson's Report of the work done by him at Lemnos is published as a separate communication in these columns.

2. As a result of the considerations mentioned above, the work in the Egyptian Hospitals has been practically limited to the ordinary routine arising from the presence of a large garrison. As will be seen from the statistical table, nearly 50 per cent. of the cases, and a great deal more than half the work, has been due to errors of refraction, and it is everywhere apparent that, as in civil life, the basis of the military ophthalmic surgeon's work is in the estimation and correction of these errors. It is also particularly with reference to refraction work that the medical officer previously accustomed to civilian practice finds it difficult only at first to look at the situation from the military point of view.

3. When a patient presents himself for examination in private practice, it is usually because he has some visual defect which he wishes corrected, or because he suffers from some secondary affection, such as headache, which he wishes relieved. Under the circumstances he tries to see as well as possible with his glasses; he is anxious to be improved; and his frame of mind is one of active assistance to the surgeon. The converse is frequently the case with the soldier. More often than not, the visual defect from which he is suffering is used by him as a possible means of avoiding active service, or if not actually of avoiding all service, of getting some lighter duty at the base or on the lines of communication. He therefore makes the most of his defect instead of the least, and is not actively concerned with getting it improved with glasses.

It is a source of great concern to some ophthalmic medical officers, on first taking up military work, to find such a surprisingly low average of visual acuity amongst the soldiers, especially when it is associated with a striking absence of high errors of refraction or of organic disease. Experience soon shows that this low visual acuity is not to be taken too seriously, and that if one finds no great error of refraction, or organic disease, the strong presumption is that the man's vision is normal or thereabouts, whatever the man may say to the contrary.

4. In this connection it may be remarked that the most difficult aspect of military ophthalmic practice is that in the great majority of cases one is dealing with symptoms and statements only; defective vision, headache, night-blindness, intolerance of light, shell-blindness, all the common military ocular complaints, are diseases of symptoms with practically no physical signs.

In cases of defective vision, not total blindness, there is no means of telling how much a man sees, except from his own statements, and if he does not mean to see test-types on a wall, nothing will make him do so, and a proof that he does see with any definite degree of visual acuity is almost impossible. On general considerations, and by various dodges, one can form a very fair opinion of a man's bona fides, but there is seldom any proof which can be demonstrated in a court of law. The question is always one between what the ophthalmic surgeon thinks the soldier should see and what the soldier will confess to seeing, and between these two conflicting opinions there may be no demonstrable decision. Fortunately, in the estimation of errors of refraction, retinoscopy affords a rapid and purely objective means of estimating the approximate extent of the soldier's visual defect, and if his statements as to his vision do not bear some relation to the nature and amount of his error he may in most cases be classified as a malingerer.

5. The same considerations apply to nearly all the other conditions mentioned above. There is in every case the assertion of the patient as to what he can or cannot see, and a total absence of physical signs. Any decision as to the facts of the case merely depends upon the credibility of the witness and the credulity of the observer.

For my own part, my experience during the last nine months (certainly an experience limited to a special class of cases) has been to convince me of the profound truth of the old legal aphorism that "what the soldier said is not evidence." The ophthalmic surgeon who believes all that he is told by soldiers and writes papers on war diseases which consist solely of symptoms, is merely writing fairy tales second-hand.

6. The experience gained generally in Egypt has been exactly that obtained by the ophthalmic surgeons in France, as noted in a recent memorandum by the Director-General.

Unless a soldier gets an obvious improvement in vision by the use of spectacles, he will probably not trouble to wear them. Myopes of moderate degree are most benefited by spectacles, and are the most grateful for them. Hypermetropia and astigmatism, up to about two dioptries, make very little difference to the visual acuity, and even with high degrees of mixed astigmatism, vision may be as good as 6/12, as anyone may ascertain from actual experiment with the appropriate lenses.

Men with low degrees of myopia and myopic astigmatism see very well in the brilliant light of Egypt, and do not complain of glare, but soldiers with hypermetropia and hypermetropic astigmatism do suffer to a considerable extent from the sun and by reflection from the sand.

7. The general practice in Egypt has been to refuse glasses at the public expense to those soldiers whose visual acuity reaches the old Army standards. Exception has, of course, been made in the case of N.C.O.'s and men principally or entirely employed in clerical work.

If a man is told that he will have to buy his own spectacles and that even though his sight is slightly defective, he will be considered fit for duty, with or without spectacles, in the great majority of cases he says he will not trouble about them any more; if he does elect to buy glasses himself for a slight error, he is probably really suffering, will wear the glasses when he has them, and will benefit from their use.

To attempt to correct all astigmatism in the British Army by ordering spectacles for every error, however small, though praiseworthy from the point of view of the ophthalmic purist, would be an impossible task, and have no military justification.

8. Nevertheless, although it has been said, and quite rightly, that a high degree of visual acuity is not needed as a rule, since this is chiefly a war of bombs and grenades, and that rifle shooting at long ranges is now required only of picked men, still the fact must not be overlooked that soldiers with visual defects, both hypermetropic and myopic, do complain, and with justification, that they cannot see to do sentry duty at night, as they suffer from partial night-blindness. For although a soldier may see 6/24 with each eye by day, his visual acuity may be much lower at night, the myope because his dilated pupils admit of much more diffusion of images, and the hypermetrope because in dim light he cannot fix individual objects upon which to accommodate, so that an error latent in the day, becomes manifest at night.

Although it is easy, therefore, to say that a soldier with vision up to the old Army standard is fit for any service in the day-time, it is often difficult to state definitely if in a border-line case he is or is not fit for sentry duty at night without glasses. And, on the other hand, a sentry wearing glasses is practically useless on a wet and windy night.

The question of night-vision is therefore of considerable importance and will probably require further investigation in the future if the wearing of spectacles in the Army becomes more common than it has been in the past.

It is unfortunate that the term "shell blindness" should have been framed for this familiar condition, which was known to

all those who, before the war, were concerned with cases of compensation under the Workmen's Compensation Act. The tightly closed eyes, the intolerance of light, and the complaints of slight or serious defects of vision, associated with the absence of all physical signs or localizing symptoms are the same during the war as they were before it, and, as in civil life the condition rapidly cleared up after the settlement of the case in the courts, so, I have little doubt, the conclusion of peace will be rapidly followed by the recovery of all cases of shell blindness, however severe they may be.

In the later months of last year, when active fighting was proceeding on the Gallipoli Peninsula, a fair number of cases of functional loss of vision ascribed to shell shock arrived in Egypt; but since the beginning of the year, few have been seen. In all cases the recovery was rapid, and I do not remember that any patients passed through my hands for invaliding home. Major Edgar Brown, of the First Australian General Hospital, reporting on the ophthalmic work at Heliopolis, remarks that "the prognosis is good in all cases," and with that opinion I am in complete accord.

The treatment suitable is an entire absence of ostentatious sympathy and fussing; an assurance that recovery is certain and will be rapid; regular employment at some work, however simple; and some degree of isolation. Colonel W. T. Lister, A.M.S., consulting ophthalmic surgeon to the forces in France, tells me that he has found that isolation in bed, bandaging both eyes, fluid diet, and deprivation of tobacco, cures most cases in about forty-eight hours.

Much has been written about the value of suggestion in the treatment of these cases, and there is no doubt that simple suggestion, hypnotism, and such faith cures as the prescription of spectacles for the correction of low degrees of astigmatism, are all efficacious, but the value of any single one of these methods of cure should not be rated too highly, as there is little doubt that cases get well without such treatment. I have found also that suggestion of other kinds is equally useful. A remark dropped in the patient's hearing that he will be invalided home in a few days, has sometimes resulted in his being found reading the newspaper in a quiet corner the next day; others have rapidly improved as the result of a threat of light but disagreeable employment. Few functionally blind soldiers can resist following the movements of a coin dropped, apparently accidentally, upon the floor or stairs; and a sudden crisis, as in the case that occurred on the sinking of the *Lusitania*, will often be followed by the sudden restoration of sight, just as cases of functional aphonia have recovered in the excitement of a boxing match, a fire, or under the influence of alcohol.

In one or two cases of defective vision following concussion, localizing symptoms in the shape of partial or complete hemianopia

have been found, and in these cases there was little doubt that the visual defect was due to bruising of the occipital cortex caused by the back of the head being hit during the act of falling.

In no case of typical shell blindness have I personally seen any physical signs whatever, although in cases of actual concussion of the eyeball by the passage of a bullet in its immediate neighbourhood, numerous retinal hæmorrhages and disturbance of retinal pigment are a common feature. Retinal hæmorrhages have, however, been seen by other observers in cases of shell concussion without external wound.

10. Many soldiers in Egypt, both British and Indian, have complained of night-blindness. As this condition may be associated with malnutrition, careful examination has always been made, but little actual disease has been found. A few cases of genuine retinitis pigmentosa have been seen, but no cases of conjunctival xerosis; and in the majority no ocular disease has been found, and the men have appeared to be in good condition and well-fed.

In two very interesting cases, both in officers, the night-blindness was only transitory, the failure of vision coming on at twilight and lasting for about two hours. At the end of that time the retina had adapted itself to the diminished illumination and vision was as good under the circumstances as that of normal persons. In both instances the condition was congenital, the fundus showed a widespread pigmentary change, not the typical spider cells of retinitis pigmentosa, but more lumpy and aggregated, with numerous small peripheral white patches, resembling retinitis punctata albescens.

This delayed adaptation of the retina to the dark has also been observed in some cases of high myopia, in which there was a thin choroid and a deficiency of retinal and choroidal pigment, and no doubt the intensity of the sunlight and of the glare from the sand in desert stations was the cause of this unusual and exaggerated retinal fatigue.

In the majority of cases, careful observation led to the conclusion that the night-blindness was either grossly exaggerated or imagined. The men alleged to be so affected, managed never to injure themselves in the dark, and on being told that they would not be invalided for the condition, nothing more was heard of it.

In this connection I may remark that I attach no importance to the constricted field of vision so often observed, not only in association with night-blindness, but also with shell shock.

To chart a field of vision accurately, even in a definite lesion of the field, requires considerable intelligence and attention on the part of the patient, and at the best of times the chart is merely approximate, while in functional cases, such as shell shock, a chart of the field of vision is of no value whatever.

I have often demonstrated that a patient, whose field of vision, as

charted, was much constricted, could thread his way among chairs and avoid obstacles in a darkened room in a way that would be impossible for a man with a field of vision so constricted from an organic lesion. I have therefore relied much more on the patient's general power of moving about without accident than on a perimeter chart.

11. Conjunctivitis has regularly caused about 10 per cent. of the ophthalmic cases in the British Hospitals. The two main varieties of conjunctivitis were the Weeks' infection, the ordinary acute muco-purulent conjunctivitis, and the Morax type, the angular conjunctivitis.

Cultivations taken in batches of cases from time to time showed the presence of one or other of these organisms, but the clinical aspect of the cases presented nothing unusual, except for the occasional severity of a Weeks' infection.

The routine treatment for cases of conjunctivitis in Egypt, both in military and civil practice, is by silver nitrate, protargol, or argyrol in acute cases where the discharge is profuse, and by zinc sulphate in all chronic cases, or in Morax infections. The zinc sulphate was usually ordered in solutions of a strength of three grains to the ounce, but I have been informed by Egyptian ophthalmic surgeons of experience that they find 1 per cent. or even 2 per cent. solutions are extremely efficacious and little more painful than weaker solutions.

12. The cases of recent trachoma have been rare and only sporadic, and there has been nowhere anything approaching even a local epidemic.

Considering the universality of the trachoma infection among the natives of Egypt (according to the report of the Director of Ophthalmic Hospitals in Egypt for 1914, over 90 per cent. of the children inspected in the primary schools being affected), this freedom from the disease speaks volumes for the personal cleanliness of the troops and for the efficiency of the sanitary arrangements. The contrast between the immunity of the troops in Egypt during this campaign and the ravages caused by trachoma among the troops during the Napoleonic campaigns in Egypt of a century ago is a striking commentary on the progress of military hygiene.

13. Corneal ulcers have been comparatively frequent, especially among troops camped in the desert. The marginal and dendritic varieties have been the commonest, and the dendritic ulcers especially have proved very intractable. All the ordinary remedies, such as antiseptic ointments, pure carbolic acid, tincture of iodine, or absolute alcohol, have been tried, but in the majority of cases progress has been extremely slow. The corneal epithelium grows over a shallow superficial mass of partially necrotic tissues, forming a very weak scar, and relapse has been constant immediately after

the patient has returned to his duties. Ionisation with zinc sulphate has been tried with success in some cases, but more generally it has been found that the cornea will not heal satisfactorily in the sandy atmosphere of Egypt, and men have been invalided home in the hope that the sea voyage and treatment in England might result in a permanent cure.

14. It has been the impression in Egypt that an unusual number of young men have been seen with early degeneration of the retina and choroid in the region of the macula.

The condition is entirely different from the single focal patch of acute exudative choroiditis in or near the macular region commonly met with in patients in early life, and more nearly resembles the ordinary senile change.

Some of the patients have given histories of having been under shell fire, and it has been a question as to whether these changes may not be a later sequel of ocular retinal concussion.

On the other hand, until access can be obtained to normal civil statistics, it is impossible to state if the condition is really unusually frequent, or whether it has merely been discovered earlier, owing to the greater necessity for acute vision on active military service.

Conclusion

The preceding notes may give the impression that there is little serious disease among the troops and a good deal of malingering and exaggerated functional disease. I think this impression is a true one, and the chief difficulty has been to determine when cases were those of genuine loss of function due to shock, or of malingering. There is no borderline between the two, but a hopeless welter of purely subjective symptoms, exaggeration, and untruth among a class of men very often incapable of accurate statement. I have taken the view that nearly all these ocular affections are only local manifestations of a general neurasthenia or nervous exhaustion, and have referred practically all of them to Major Walsh, the specialist in diseases of the nervous system, for general examination and treatment.

Fortunately, as I have said before, the prognosis is generally good, and a little sound advice and sane untheatrical treatment effect a rapid cure in nearly every case.

Finally, in justice to the troops generally, it must not be forgotten that our experience has been limited to the examination of those men with a low nervous system or morale, and that they form a very small percentage of the whole force. My remarks must, therefore, not be taken as implying any general reflection upon the courage and endurance of the Army as a whole.