effecting changes in the home environment and, at times, in the economic situation. The cost of such additional personnel could be repaid many times by an increase in the number of trained soldiers remaining in the Service instead of leaving to care for their mentally sick dependants. It may well be that child guidance clinics will be established in the major military centres in overseas theatres.

In these days of economies and a reduction by some 66 per cent in the strength of the fighting services one often hears the suggestion that it might be more economic if the care and treatment of mentally sick soldiers and their dependants were handed over to the National Health Service. Overseas, this is obviously impracticable and at home it is considered that the cost is more than justified by the realisation that of all members of the Service, or their dependants, who have the misfortune to fall seriously ill with a disease of the mind, fewer than 1 per cent now fail to return to duty or to useful employment in their home towns. The Army must remain a good employer and look after all its members when they fall sick from any illness, be it of the body or the mind.

OPHTHALMOLOGY SINCE 1948
BY
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In the Golden Jubilee Number of the *Journal of the Royal Army Medical Corps*, military ophthalmology was surveyed from the time of Omdurman and though little change has taken place in our organisation since 1948 a considerable output of work has been maintained. A total of some 58,000 patients has been seen annually. The Optical Sections have supplied some 18,000 pairs of respirator spectacles annually in the United Kingdom alone.

The number of Regular ophthalmologists available has been small and the necessity to train officers in the speciality has strained our resources. Few National Service medical officers have been suitable for employment, as most lack pre-Service specialist experience. In 1952 new Standing Orders for opticians were published allowing those qualified to be employed in sight-testing. This is in accord with the organisation in the National Health Service and has been a help to Army ophthalmologists, particularly in dealing with recruit intakes. An important part of the optician’s duties is to dispense without delay spectacles for use with respirators so that recruit training is not interrupted.

Since the establishment of the National Health Service, civilian-type spectacles have been available to all ranks at the same rates as those charged to civilians. These spectacles are prescribed by Army ophthalmic clinics and supplied by contract. Spectacles of the respirator type are still an issue and
recently an improved pattern, the Mark IV, has been introduced with larger eye-pieces, curved lenses, and sides better adapted to fit under the respirator than the Mark III, which it replaces.

In matters of more general ophthalmological interest and progress it is difficult to make a selection. There has been a change from individual to team work in the establishment of special clinics to study such problems as glaucoma about which we know so little. The pattern of diseases changes with time, and it is often difficult to decide whether the credit for some improvement is due to new therapy or to improved standards of living. Such conditions as interstitial keratitis, phlyctenular keratoconjunctivitis and hypopion ulceration are now rare though common twenty years ago, while herpetic conditions of the cornea remain as common as ever. Doubtless the effect of the antibiotics on bacterial and spirochaetal infections is partly responsible, the viruses being much less sensitive, though even in this field progress is being made as instanced by the improved prospects in trachoma. As elsewhere in medicine, ophthalmology has benefited greatly by the discovery of the sulphonamides, antibiotics and, more recently, of cortisone which can be administered to the eye locally and which is most valuable in controlling inflammatory conditions, particularly of the anterior segment. Its value in conditions affecting the posterior segment is less certain though systemic administration offers some hope of success.

However, when due allowance has been made for the changes due to pharmacological and social progress there remain those conditions which are mainly surgical and which include cataract, retinal detachment, enucleation, keratoplasty, neoplasms, squint and diplopia.

Though the treatment of senile cataract is not of great importance in the Army there is a small but steady flow of men who, usually as a result of injury, develop monocular cataracts, and though successful treatment is often possible the patient is left with monocular vision unless further steps are taken. Binocular vision can often be restored by the fitting of contact lenses, but the use of intraocular acrylic lenses introduced in 1949, or the more recent Strampelli lens which can be placed in the anterior chamber, open up further possibilities.

Retinal detachment is another misfortune which befalls the soldier, sometimes spontaneously, more often as a result of trauma. While the diathermy operation is successful in many cases, other methods are being tried, such as scleral resection in which a portion of the sclera is excised or pleated, thereby reducing the size of the eye-ball and so shrinking it down on to the retina. This measure may be assisted by the injection of air or vitreous humour, thereby pushing the detached retina back against the wall of the eye. The success of such measures may be less certain than the diathermy operation but they are invoked in the more difficult cases in which success is already less assured.

Herpetic disease of the cornea is prevalent and frequently leaves an anaesthetic, badly scarred cornea which is subject to recurrent attacks of keratitis. This condition is of concern to the Army surgeon as a cause of recurrent sickness and poses a problem of disposal as these patients tolerate tropical sunlight badly. In such cases a lamellar keratoplasty may restore a healthy surface to the cornea,
to be followed later, if necessary, by a full thickness graft with a view to the restoration of vision. Corneal opacities due to other causes are amenable to grafting in suitable cases though this valuable measure is limited by shortage of donor material.

Concomitant squints offer no great problem to the military ophthalmologist at home. His patients are usually adults with one amblyopic eye. Once the question of suitability for service has been settled the only treatment necessary is a cosmetic operation if desired by the individual and this may be fully justified on psychological grounds. Overseas, it is another matter. The care of families entirely devolves on the Army Medical Services and the treatment of squints in young children is highly important to prevent squinting eyes from becoming amblyopic and to maintain or restore binocular vision. In the United Kingdom there is an organised hospital eye service which includes those very valuable medical auxiliaries, the orthoptists, who play an important part in the treatment of squint and indeed are almost indispensable in busy centres. Parents are naturally anxious about their children’s squints and may feel that facilities available at home are lacking overseas. Impressed by the "better sight without glasses" school of thought, and of the importance of "exercises," they may form a wrong impression of the role of orthoptics and think that the treatment of squint is impossible without such assistance. Nevertheless the mainstay of the treatment of squint remains surgical, though this is not to deny that the surgeon is relieved of much arduous and time-consuming work when an orthoptist is available. Paralytic squints, often the result of road accidents, are not uncommon either at home or abroad and may give rise to distressing and disabling diplopia. Single binocular vision can often be restored either wholly or in part by careful surgical adjustment of the extra-ocular muscles, and here also the assistance of an orthoptist is invaluable.

Inevitably, through disease or injury, a number of eyes are lost. The problem is then to provide a socket which will accept an artificial eye, which by its movements will appear natural. This is attempted by introducing an implant into the cavity left when the eye-ball is removed and sewing the four rectus muscles to it. Undoubtedly the partially buried implant, with its direct attachment to the artificial eye, gives the more natural movement but the procedure is surgically unsound and few of the earlier implants of this type have survived. Completely buried implants are available which give very fair movement and are probably the only ones suitable for use in the Army.

A number of problems of importance and of interest to ophthalmologists are under investigation, the most important being that of the temporary blindness resulting when the unprotected eye is exposed to the flash of an atomic explosion at night. Retinal burns are liable to occur only in those who gaze at the fireball by day or night, but the intense illumination produced at night inevitably abolishes dark adaptation, probably for quite considerable periods, conducing to confusion and disaster in critical situations.

Plastic goggles are now available which will protect the eyes of those engaged in such dangerous work as mine detection. These goggles will keep out most
high-velocity metallic particles, a very important matter considering how destructive retained intraocular foreign bodies can be.

Research is also being carried out with a view to evolving a goggle suitable for wear in desert and tropical areas, a problem which involves the reconciliation of such opposing factors as ventilation and dust exclusion. The fact that outbreaks of keratoconjunctivitis due to ultra-violet light occurred in drivers in Northern Australia during the war indicates the importance of such researches.

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**OTOLARYNGOLOGY, 1948-1958**

By

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Invaliding from otolaryngological diseases has shown very little change in the Army over the past ten years and has been confined mainly to those cases of chronic suppurative otitis media and para-nasal sinus disease which have eluded diagnosis at initial selection procedure. The entry standards for both Regular and National Service men have been progressively raised over recent years, thus eliminating the formerly disproportionate amount of inefficiency due to chronic ear disease. The all-Regular Army of the future will demand yet higher standards than have hitherto been possible as there will be no place for men who are of restricted medical category on otological grounds. Examination of all recruits by a specialist on enlistment or before final acceptance is recommended.

**Deafness**

The increasing velocity of projectiles from modern weapons has resulted in a higher incidence of perceptive deafness due to acoustic trauma following end organ damage of the cochlea. It is anticipated that this problem will increase in future and its prevention is difficult. The issue of rubber or moulded plastic defenders is of doubtful value: they are seldom worn and soon get lost. In sub-tropical and tropical regions, their presence in the external meatus is conducive to otitis externa. Experience to date has shown that the issue of cotton-wool for use as disposable plugs, especially if lubricated, is the most practicable solution.

A further development that has accompanied the increased tempo and stress of modern warfare is the occurrence of psychogenic deafness: the normal temporary deafness experienced in firing may be used by susceptible subjects who project this into a retreat from the hardships of army life. Here lies a considerable field for co-operation between the otolaryngologist and the psychiatrist, the condition being more amenable to treatment in the individual atmosphere of a psychiatric consultation than in the Ear, Nose and Throat Out-patient Department.