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.

OTOLARYNGOLOGY, 1948-1958

BY
Lieut.-Colonel H. N. PERKINS, M.B.(Lond), F.R.C.S., D.L.O.
Royal Army Medical Corps
Adviser in Otolaryngology

INVALIDING from oto-Iaryngological 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.
Hearing aids of the government-sponsored Medresco type have been issued to military personnel on an individual basis for the past eight years, though mainly confined in the United Kingdom to the senior commissioned and non-commissioned ranks with a limited expectation of further service and employed on base and line of communication duties. Overseas, hearing aids are also provided for military families. Improved smaller and lighter patterns of hearing aid will soon be available.

The education of the deaf child presents a difficult problem in the Services, particularly overseas where no special schools exist. In the United Kingdom, facilities are limited, but each case as it comes to light is placed on the waiting list for admission to a residential school in co-operation with the local county education authorities.

**Otitis externa**

Probably the greatest remaining problem facing the Army otolaryngologist is the prevalence of otitis externa in those leading a community life, a prevalence which is greatly accentuated in the warm, damp climates of many overseas stations where the disease accounts for a considerable amount of temporary inefficiency. Treatments recommended have been legion, but the adoption in recent years of 1 per cent hydrocortisone ointment has shown promise. An interesting observation in young soldiers is the co-existence of otitis externa and the eruption of the third molar teeth.

**Surgical technique**

Emphasis in aural surgery is passing to the restoration of hearing damaged by disease after ablation of the diseased area. The fine techniques of tympanoplasty and myringoplasty have great possibilities in Army otology especially for the repair of traumatic lesions of the tympanic membrane.

Recent years have seen the virtual abolition of the formerly common acute mastoid surgery in children and young adults which is reflected in the rarity of intracranial and other complications of chronic suppurative ear disease. Many factors have combined to achieve this: better living standards, improved school medical services, and the advent of chemotherapy and antibiotics.

Radical developments have also taken place over the past decade in the surgical approach to the nose and naso-pharynx, especially in connection with the treatment of malignant disease of these formerly somewhat inaccessible regions. Here surgery and radiotherapy become interdependent: without the recent advances in the application of modern radiotherapeutic measures, these surgical procedures would be less successful. The approach to the naso-pharynx by the trans-palatal route has revolutionised the treatment of such diversified conditions as congenital choanal atresia of the posterior nares and new growths, both benign and malignant, of the naso-pharynx.

Malignant neoplasm of the maxillary antra and of the ethmoidal group of para-nasal air sinuses formerly carried a grave prognosis, but whilst the present figures still leave much to be desired, the combination of tele-radiation and palatal fenestration of the superior maxilla ensures complete clearance of disease.
from a cavity which can then be inspected adequately and any recurrence can be dealt with in its earliest stages.

**Equipment**

The consensus of opinion is that the equipment provided for our Ear, Nose and Throat Departments in peace and war scales is adequate for any recognised procedure. Modern methods of auditory testing by pure-tone audiometry are available at several military hospitals in the United Kingdom and special sound-proof testing booths have been constructed. Overseas, the chief difficulty to be overcome is the adequate servicing of these instruments and this has so far precluded their installation.

---

**ANÆSTHESIA, 1948-1958**

BY


*Royal Army Medical Corps*

*Adviser in Anaesthetics*

It has been a momentous decade for the speciality of Anaesthetics. The introduction and elaboration of the muscle-relaxant group of drugs has resulted in a revolutionary change in the conception of the basic principles governing the management of general anaesthesia. The development of new anaesthetic agents and techniques and improvements in the design of anaesthetic equipment have made anaesthesia safer, have improved operating conditions, and have enhanced post-operative recovery. Specialised techniques such as controlled hypotension and induced hypothermia have made surgery possible for conditions previously considered inoperable. Techniques for local analgesia have become safer and more effective with the introduction of the new synthetic drug lignocaine, which has now largely replaced procaine in clinical practice. The Army has been by no means slow in conforming with these modern trends.

**General anaesthesia**

Today deep anaesthesia is found to be neither necessary nor desirable. The use of toxic doses of the more potent anaesthetic agents is now avoided, and instead, by means of the precise administration of selective doses of the appropriate drugs, both by inhalation and by intravenous injection, it has become possible to control accurately the degree of narcosis, analgesia, muscular activity, reflex action and respiratory movement, as may be most suited to the requirement of the operative procedure, with minimal disturbance of the subject's normal physiological processes. This principle has found universal favour and acceptance among anaesthetists, and the improved results obtained are acclaimed by both patient and surgeon. All this is dependent upon the availability of complicated apparatus, a liberal supply of medical gases and a multitude of intravenous agents, all or part of which may be denied to the anaesthetist working under...