New anaesthetic techniques are being investigated. The production of "ataralgesia" as described by Hayward-Butt, by the administration in heavy dosage of analgesic (pethidine), tranquilliser (pactal) and respiratory stimulant (daptazole), which is characterised by complete generalised analgesia with retention of consciousness, is of particular interest in the management of mass casualties. This technique, it is claimed, provides a co-operative, carefree and painfree patient, who can be subjected to surgical operation without further anaesthesia. Such a method clearly deserves the most extensive investigation.

Conclusion

From this brief review of progress in the speciality of Anaesthetics during the past ten years, and of its impact on the Army anaesthetist, it is apparent that the Royal Army Medical Corps is moving with the times and playing its part in applying all the benefits of modern anaesthesia to the military patient.

It can be justly claimed for instance that the excellence of the results of the surgical treatment of casualties in Korea was attributable in no small way to modern anaesthesia.

The training of the Army anaesthetist must enable him to achieve the academic distinction, experience and practical competence of the consultant specialist, but, unlike his civilian colleague, he must also be skilled in the use of simple "rag and bottle" methods of anaesthesia, if he is to be capable of operating under improvised conditions in the field.

The opportunities for specialising in the Army in this branch of medicine are greater than ever before, and it can be confidently asserted that the general standard of anaesthetic equipment provided for the Royal Army Medical Corps compares favourably with that of any other medical service in the world.

---

RADIOLOGY, 1948-1958

BY

Lieut.-Colonel T. M. CORCORAN, M.R.C.S., L.R.C.P., D.M.R.D.

Royal Army Medical Corps

Adviser in Radiology

During the past ten years the general trend towards an increased resort to radiological examination has reflected the practice in civil hospitals. Thus in 1950, the total number of radiographic examinations in the Army was 168,000, including almost 70,000 chest cases; by 1954 the total had increased to almost 216,000 with 84,500 chest examinations.

Personnel

The senior radiographers are Regulars of fairly long service whose standards of knowledge and skill have risen sharply and it has now become the rule for senior radiographers to hold the Membership or Fellowship of the Society of Radiographers.
In 1950 the Army X-ray School was transferred from the Royal Army Medical College to the Royal Herbert Hospital. Expansion on a large scale is now proceeding. An advantage of siting the School at the Royal Herbert Hospital is proximity to a large hospital X-ray department. The major work of the School has continued to be the training of junior radiographers of whom an average of seventy have successfully passed the course each year.

To meet modern military requirements the basic course has been increased in length, and the Regulars (who will in time become senior radiographers) are recalled to the School for further instruction, which amplifies the basic courses in preparation for the examinations for radiographer and for the Membership of the Society of Radiographers. Training is also carried out in the X-ray departments of the larger military hospitals. There are also courses for R.E.M.E. and R.A.V.C. personnel. Students at the School have included Gurkhas and soldiers from Jordan and West Africa.

The Society of Radiographers recognises the Corps training of radiographers who are Regular soldiers, provided that their general educational standard is adequate. Radiographers class I are exempted from the first part of the Society's examination and are allowed to proceed direct to the final part.

**Apparatus and accessories**

The control and surgical treatment of pulmonary tuberculosis has made tomography essential in all main hospitals. The method has thrown light on unusual manifestations of the disease and also on the investigation of other systems of the body. The use of the newer media and of the more powerful and flexible apparatus provided has improved gastroenterological investigations and has increased their value to both physicians and surgeons, while the newer opaque media used in the radiography of the lungs, the urinary system, the bile ducts and the peripheral vessels have further improved investigations. Special mention should be made of the radiographical examination of a series of cases of arterial occlusion of the lower extremity at The Queen Alexandra Military Hospital, as well as of the greater information afforded by phlebography now available.

All major Army X-ray departments have been or are being equipped with high-voltage, high output X-ray units together with motor-driven tilting couches, serial film changers and tomographic attachments. The fastest screens and films are now normal issue.

**Radiation hazards**

There has been a growing awareness of the risks due to atomic, gamma, “X” and kindred radiations throughout the world and for many years the Army Medical Directorate has realised the risk of exposure to “X” radiation to personnel and patients. Since 1939 all equipment purchased has been subject to strict standards of protection. Protective clothing—e.g., aprons and gloves—have always been of a protective value above that required for maximum kilovoltages used in military hospitals, but improvements in texture have recently been introduced so that now, while keeping the protective value of these items adequate,
the comfort of the wearer is also catered for by really flexible gloves and aprons. In addition to these precautions, departments are surveyed to ascertain radiation levels under working conditions and tests have also been undertaken at frequent intervals using the film badge method both for the department and for personnel. Film badge monitoring of personnel has been undertaken as and when required, but the standard of protection in military X-ray departments has been such that regular monitoring has not been considered essential. However, with the advent of much more powerful apparatus it has recently been decided to carry out for a trial period a regular weekly monitoring service.

Mass miniature radiography

Nine teams have carried out mass miniature radiography in the United Kingdom and examined a total of 1,131,575 individuals over the past ten years. Their main work has been to examine recruits who have not been examined by the Ministry of Labour and National Service, Regular soldiers undergoing routine review, officers, soldiers and families of all units proceeding and on return from overseas, all ranks released from full-time service, civilians in the employment of the War Department, units under survey for special reasons (e.g., where cases of open tuberculosis have been discovered) and in some cases the personnel of other Services.

In 1957 four teams of the M.M.R. unit took part in a mass survey of the civilian population of Glasgow and 88,553 cases were examined. Until 1957 the work of M.M.R. was carried out with improvised vehicles. In 1958 five Leyland X-ray laboratories were brought into use and they have resulted in smoother and more efficient working. Two mass miniature radiography teams are now working among British personnel in Germany. Two teams are also working in Malaya.

It will be seen from this brief survey that Radiology is playing an increasing role in the work of the Corps.

ARMY MEDICAL DEPARTMENT STATISTICS

BY

S. ROSENBAUM, M.A.
Principal Scientific Officer, The War Office

WITHIN the fairly recent past, a statistical branch sprang from the war-time Directorate of Medical (Statistical) Research, which was absorbed in 1947 into the Directorate of Army Health as A.M.D.5 (Stats). In 1951 it was given a separate establishment, and re-named A.M.D. Stats.

The branch, however, has a much older history than this. When the Royal Sanitary Commission published its famous Report in 1858,1 a hundred years ago,

1 Report of the Commissioners appointed to inquire into the Regulations affecting the sanitary conditions of the Army, the organisation of military hospitals, and the treatment of the sick and wounded (1858). H.M.S.O.