The breakdown per 1,000 men is almost negligible, and it is felt that this was almost certainly due to the absence of intense enemy shell fire and aerial bombing. The R.T.U. rate for U.K. personnel was 65 per cent. and the number of relapses was insignificant. Anxiety reactions as usual were the most common clinical entity encountered and some success with a superficial form of psychotherapy can be claimed in a number of these cases.

The importance of psychiatric screening and personnel selection has been stressed and is exemplified by a comparison of U.K. troops with troops from other Commonwealth countries.

Frostbite has been mentioned and its incidence may in future campaigns be of importance in assessing the morale of a military force.

AN ANÄSTHETIST’S VISIT TO A U.S. ARMY HOSPITAL IN JAPAN

BY

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Royal Army Medical Corps

I VISITED the hospital, which was formerly a mission hospital and is now divided into a main block and an orthopaedic annex, on 9th and 10th December, 1951, and had a most cordial reception from the anaesthetic staff. We discussed anaesthetic arrangements in both armies and I had an opportunity of inspecting their equipment and watching them at work.

In the main hospital there is one central theatre block with five single-table operating theatres. There is one small room for anaesthetic equipment and stores. Inductions are carried out on the operating table in the theatre. Each theatre has one full-time anaesthetic nurse in charge and she has all the necessary equipment on the spot. Supervising the five sisters is a recognized anaesthesiologist of the American Board.

Equipment

Each theatre has one Heidbrink or McKesson machine, standard Army models, using nitrous oxide, oxygen and ether only, and with double carbon dioxide absorption canisters. The former machine is good; the latter they considered poor because of the high resistance in the circuit.

The equipment and drugs are based on the simplest techniques and procedures, possibly because almost all the anaesthetics are administered by nurses. Each theatre has an anaesthetic trolley with adequate storage capacity for every likely requirement of the nurse during operation. Incorporated in the trolley is a suction pump for the use of the anaesthetist only. The nurse never leaves
Visit to a U.S. Army Hospital in Japan

The case during operation, and the anæsthesiologist is always available should there be any difficulty or trouble.

Theatre orderlies are available to change cylinders, etc., should this be required. Cylinders are all paired, large size, with pressure tubing delivery to the machines. Routine pulse, blood pressure and respiration charts are maintained in every case. The anæsthesiologist himself only does major paediatric cases and the occasional very seriously ill patient. He also does all transtracheal injections, spinals, and major blocks, although the E.N.T. and thoracic surgeons do their own local procedures.

Cyclopropane and trichlorethylene are not used. Muscle relaxants are regarded as not yet being established and are therefore not authorized. Their supply through private sources is strongly deprecated.

Pentothal (thiopentone), which is used as the main anæsthetic drug supported by nitrous oxide and, when necessary, ether, is given slowly but in large total dosage. A 2½ per cent. solution is always used, given in the glucose drip from a 30 c.c. syringe via a three-way tap. Sufficient syringes are available to make up two to three days’ supply at a time, and the charged syringes are stored in a Frigidaire. Induction is slow, to avoid any danger of apnæa. The drug is then administered intermittently throughout the operation, and doses of 2-2½ g. over one to three hours do not appear uncommon.

**PREMEDICATION**

The normal routine is: Nembutal, gr. 1½, the previous evening; nembutal, gr. 1½, two hours before operation; demerol (pethidine), 100 mg., one hour before operation; atropine, gr. 1/150, 1 hour before operation.

Apart from the atropine, which appeared inadequate, the effect is excellent, and I have tried the sequence with satisfactory results.

“Transtracheal” cocainization worries the patients less after this premedication than when they have had either omnopon and scopolamine or morphine and atropine.

*Suction.*—Every case is carefully sucked dry post-operatively and, if necessary, tracheal toilet is carried out. I thought that premedication with atropine, gr. 1/150, as a routine was too small and persuaded the anæsthesiologist to try gr. 1/100. He seemed unduly scared as he regarded this as a possible toxic dose.

Young children up to six months of age are given no drying agent or premedication at all, atropine being considered too toxic.

**Neurological Cases.**—Premedication is by atropine, gr. 1/150, only, followed by transtracheal cocaine; thiopentone induction, intubation and continuation with intermittent pentothal and nitrous oxide-oxygen only.

**Chest and Upper Abdomen.**—Standard premedication; transtracheal cocaine, thiopentone induction, cuffed tube, thiopentone, nitrous oxide, oxygen and ether with aided respiration. Curare is not often used, nor controlled respiration.
Lower Abdomen.—Lower limbs, urogenital, rectal operations and caesarians are all done under spinal analgesia using procaine up to 100 mg. in C.S.F., or pontocaine (amethocaine) up to 15 mg. in dextrose, or a mixture of both.

The anaesthesiologist is not really worried about post-operative morbidity following spinals, but we have noticed in the British Military Hospital that many patients who have spinals in Korea dread them and are extremely relieved when they inquire and find that we do not use them.

**General**

Caudal and brachial blocks are rarely given because of the time factor. Children are induced with vinethine (vinesthine). Demerol (pethidine) is rarely used as a supplementary agent during anaesthesia. Intubation seems to be done almost as a routine. I was told it was indicated for any operation lasting over one hour, but I saw it given in shorter cases without any special indication. The usual technique for intubation is:

(a) Transtracheal injection of 2 c.c. of 4 per cent. cocaine while the patient takes a deep breath. He is then encouraged to cough and spit out any cocaine possible. The full effect comes on in five minutes and lasts up to twenty minutes.

(b) After five to ten minutes, slow induction with 2½ per cent. thiopentone, 0.5 g. or more as required.

(c) Intubation at leisure with insensitive cords and normally without "bucking." The only relative failure I saw was in a case of head injury with sticky, tenacious sputum.

(d) Continuation by nitrous oxide, oxygen and intermittent thiopentone with or without ether.

**Comment.**—I have tried transtracheal injections in 18 cases. It works well for intubation, but it is uncomfortable and at times distressing (one case) and I do not think it justified as a routine.

**Fluid Replacement**

Every case of over fifteen minutes is given a minimum of 1 litre of 5 per cent. glucose by intravenous drip, started immediately prior to induction. A new set is used for each case and then discarded. One-fifth of saline and glucose is used if it is anticipated that blood will be required.

In principle, all fluids lost at operation are replaced at the time, with a tendency for the blood to be more than compensated.

Dextran is not used. I was told that this followed experiments in one U.S. Army hospital where dextran in conscious patients caused too high a proportion of reactions.

Syringes, needles, drip connections, etc., all have the one standard fitting. All are in good supply and of very high quality. They are sterilized by autoclaving.
CONCLUSION

The U.S. system works smoothly and well. There is a delay of fifteen minutes or more between cases. The cough reflex usually returns during pharyngeal and tracheal toilet. Post-operatively the patients seem to do well.

All cases, apart from the thoracic and E.N.T., are transferred to a post-operative ward next to the theatre where there is a specially trained staff. The anaesthesiologist visits this ward from time to time during the day and is on close call at any time if required. Unconscious patients are nursed in the lateral or semi-prone position.

My feeling is that the system is simple and safe, and the results good. Possibly the results are not quite so good as ours where we have doctors administering the anaesthetics and are therefore allowed a wider and more appropriate range of agents.

I do not like their extensive use of spinals.

MILITARY OPHTHALMOLOGY IN SINGAPORE AND MALAYA

BY

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THREE years of ophthalmic practice for the three Services and Foreign Office staff in Singapore and Malaya from 1949 to 1952 has led to some observations which are recorded in this paper.

INJURY TO THE EYE

Seventy-seven cases of injury to the eye were admitted to the eye wards of the B.M.H., Singapore, which was approximately 16 per cent. of all ophthalmic admissions. The causes of these injuries were numerous, and no particular cause could be held responsible for any large group of cases which could be eliminated by more care and protective means.

The causes of injury to an eye may be summed up as follows:

<table>
<thead>
<tr>
<th>Cases</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>1. Injury by instruments (e.g., screwdriver, tin opener, wood chopper, knife, hammer and chisel)</td>
<td>16</td>
</tr>
<tr>
<td>2. Miscellaneous causes (e.g., blows on eye by fist, knocking into objects, struck by moving objects)</td>
<td>16</td>
</tr>
<tr>
<td>3. Sport (e.g., blow on face by football, snapping of metal bow in archery, struck by a finger whilst swimming, kick in eye)</td>
<td>13</td>
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