THOUGHTS ON FOUR YEARS OF WAR SURGERY—1939 TO 1943

BY

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It seems to me that one may now profitably look back and attempt to assess the value of the surgical procedures carried out during the four years of war. Enough time has elapsed and enough casualties have been treated, both over-seas and at home, to enable such an assessment to be made of whatever progress has been achieved, and to draw conclusions as to the value of the procedure adopted. In this respect it is a great pity that our surgeons and would-be surgeons had not acquainted themselves with the Official History of the War of 1914-18 concerning the Medical Services and the principles and practice during that period, or even troubled to read and digest one or other of the smaller books (Mitchiner and Cowell, 1941; Maingot and Slesinger, 1943) epitomizing the essentials of the hard surgical work and experience so admirably set forth in the Official History.

We hear a great deal of the improvement in the medical services in this war, but I cannot help feeling that, in spite of advanced surgical units, more rapid ground and aerial transport, and even congratulatory medical broadcasts, this progress is not so great as one would like to believe, especially in the prevention and control of sepsis; for the number of limbless patients landing from the Middle East and North Africa is by no means negligible. It would appear, therefore, that the self-congratulatory coma into which some of our "specialist" colleagues have allowed themselves to lapse is almost without justification. Possibly there is some failure to understand that while the ultimate aim of all surgery is the restoration of health, the primary objectives by which this aim is attained are essentially different in peace and in war. The objective in peacetime surgery is the eradication of disease; in war surgery it is the prevention and elimination of infection.

I propose here to deal seriatim with some of the surgical conditions more commonly seen and the types of wounds and injuries, and to indicate salient points in the treatment where progress has been made and where agreement has been reached.

Some Common Surgical Conditions

Minor septic skin conditions are frequent and by no means always yield readily to sulphanilamide powders and ointments. Indeed, a certain amount of residual dermatitis is seen after the application of sulphonamide drugs.

Whitlows, major and minor, are—as might be expected—not infrequently seen, especially among those whose work in machine shops, etc., exposes them to minor injuries of the fingers and hands. On the whole, progress of these cases is satisfactory, though many crippling results are seen. There is no doubt that the rule that all such cases should be admitted immediately to hospital—where they receive adequate and early treatment combined with immobilization—is productive of excellent results.

Appendicitis is often seen in its acute form, but presents no special problem. It is well known that 70% of pathological appendices are retrocaecal in position; the transition, therefore, from a frequently static life to the strenuous physical exertion in the Services probably accounts for the large number of these cases seen in the first few months.

Varicose veins form a large and important class of case. It cannot be stressed too strongly that unless pain, discomfort, or ulcers are present, no treatment—other than reassurance of the patient—is called for; while the injection of such cases in the presence of valvular incompetence without previous operation is useless and often productive of injection ulcers due to leakage.

Haemorrhoids are quite common in recruits, and occur at surprisingly young ages, so that I have no doubt that interference with personal sanitary routine consequent on Army life is a cause of this disease. While injection is excellent in its results if bleeding alone is present, under the stress of Army

life I have no hesitation in advocating operative intervention (excision of the piles) in any case in which prolapse is present, irrespective of whether this is reducible by itself or not.

Perforated gastric and duodenal ulcers are also of common occurrence, and where prompt surgery is possible good results usually accrue. It is certainly inadvisable to do more than close the perforation.

Carcinoma of the Stomach and Rectum.—The number of cases seen in young men is rather alarming, and gives food for reflection.

Hernia cases, mainly inguinal, are often seen, and it would appear—judging from Army statistics—that some 10 to 15% of the male population of this country suffer from hernia. Alarming figures have been produced about the recurrence rate after herniotomy. Judging from my own personal experience, fully 50% of these "recurrent" herniae are the result of inadequate surgery at the original operation; in many cases congenital hernia sacs still exist *in toto*, while inadequate removal of the sac is also frequently observed. It cannot, in my opinion, be stressed too strongly that in a young male with good lower abdominal musculature no operation beyond complete removal of the hernial sac is advisable or necessary; repair operations in these cases will lead to deterioration of muscle and a tendency to recur because the natural barrier to herniation is interfered with. Furthermore, in cases with weak lower abdominal musculature, exercises for the strengthening of these muscles should be carried out under proper supervision for three to four weeks *before* operation. This procedure undoubtedly lessens the recurrence rate in such cases and makes many—otherwise quite unsuitable for operation—fit to undergo it with a reasonable chance of non-recurrence. Do not operate when for various reasons recurrence is obviously to be expected: operation in such cases helps neither patient nor surgeon.

Chronic epididymitis of dubious origin is quite frequent in the Forces. It usually affects young males aged 18 to 25, in whom there is often no history of sexual intercourse. Bacteriologically, the condition is not regarded as gonococcal in origin, but in some cases this organism has been obtained from the lesion, as have also staphylococci, streptococci, and *B. coli*, though in the majority the condition is culturally sterile. Clinically, there may be a thickened nodule, usually situated on the lobus minor or part of the epididymis, but the whole epididymis may be thickened and smooth. Congestive pain and some tender swelling of the testis are sometimes met with. Very seldom can a hydrocele be detected clinically—a point of some importance in the differential diagnosis. The condition is very generally unilateral only, but now and then the epididymes of both sides are almost simultaneously affected. The treatment is conservative, and the condition is of no immediate importance, except for the danger of misdiagnosis, which often results in an unnecessary orchidectomy. The differential diagnosis which apparently causes most misunderstanding is that of neoplasm, but the absence of any hydrocele makes one hesitate to diagnose a testicular neoplasm, and in such a case conservative treatment by supporting the testicle is always justifiable. The second alternative diagnosis which may be erroneously made is that of tuberculous epididymitis; but in the chronic condition under discussion there is a smooth-feeling epididymal swelling, and though the cord as a whole may be thickened there is never nodulation of the vas or of the epididymis, while rectal examination will reveal no abnormality in the prostate or vesicula seminalis.

Sciatica.—A large number of cases of sciatica, many of which come on suddenly after strain or accident, seem to be traumatic in origin. All such cases must be treated first by complete rest for 14 days, when, if pain occurs on leaving bed, they should be treated in a plaster-of-Paris bed for 6 to 8 weeks, and operation for the excision of the herniated nucleus pulposus undertaken only in patients feeling pain when they move about after leaving the plaster-of-Paris bed. Further delay in surgical intervention is deleterious, whereas the results of operation are usually most satisfactory, and many of the patients are able to return to full duty.

Operations for Internal Derangement of the Knee.—From conversations with many surgeons and medical officers I gather a general impression that the results of operation for this

condition are frequently and rather unexpectedly disappointing, both in the long time such patients remain in hospital after operation and from the fact that apparently only about one-third are restored to full Service duty. A careful investigation into these facts by Hedley Whyte shows that of 1,100-odd patients 50% returned in Category A1, after an average stay in hospital and convalescent depot (for rehabilitation) of from 80 to 100 days, according to whether the treatment was given in a military or an E.M.S. institution. In the remaining 50% down-grading had to be carried out in a large proportion of cases. Thus it appears that results of operation for internal derangement of the knee are statistically better than the general opinion suggests, but it must be remembered that those graded A1 may not have been able to carry out their full duty on return to their unit. Anyway, perfection has obviously not yet been reached. It is for consideration, therefore, whether the complete removal of the meniscus, so generally practised by my orthopaedic colleagues, is not a rather too drastic operation, and whether a return to the removal of the damaged part of the cartilage alone would not be advantageous.

Tonsillectomies and operations on the nasal septum undoubtedly constitute scalps for the operating surgeons, but how often do they make the patient any more fit for full duty in the rough and tumble of Service life?

Broken Hypodermic Needles.—I would offer a word of advice to my medical and dental colleagues on the subject of treatment of broken hypodermic needles within the human body. It must be remembered that operation should be undertaken only after careful radiographs, stereoscopic if possible, have been obtained, and that any operation—whether successful or not—is certain to be followed by a painful scar, disability, and often suppuration, while not more than 1 in 500 of these broken pieces of steel causes subsequent trouble if left alone. It is therefore in most cases inadvisable to attempt any surgical intervention for the removal of a particle of a hypodermic needle left in the tissues, and the deeper this is situated the less advisable is operation.

Treatment of War Wounds

The outstanding problem of this war seems to me to lie in adequate and early surgery of the *slightly wounded* cases, which, after all, still constitute 60 to 70% of war wounds. It is surely economical and advantageous to the national effort that these men should be fit to return to the fighting line in as short a time as possible. I would suggest, therefore, the revision of our methods in this respect, so that precedence of treatment, with a view to securing early healing and prevention of infection, should be given to these more lightly wounded cases. It is furthermore necessary that they should be adequately dealt with by efficient surgeons as near the battle front as possible, and an early return to the front line ensured by active rehabilitation, mental and physical, in an atmosphere of battle.

In contrast to what was seen in the last war, when a large number of wounds were from bullets, those seen in the present war are mainly lacerated wounds of a severe type, and the mortality from these—as might be expected—is much higher. Indeed, in the bombing casualties of aerial warfare it would appear that some 50% of the patients die either as a result of the actual injury plus blast or very soon after from haemorrhage and shock due to the severity of the wound inflicted.

It follows, therefore, that in the treatment of wounds *resuscitation* plays an important part. This must be carried out early and consistently by the application of warmth, the giving of hot drinks and morphine, and the transfusion of serum or, better still, whole blood. The Blood Transfusion Service has undoubtedly played a great part in reducing the mortality from wounds of all types. At the same time, however, one cannot help feeling there is a tendency to over-evaluate blood transfusion to the detriment of older and simpler methods of resuscitation and wound treatment. Hot sweet fluids by mouth, warmth, and morphine are simpler methods of combating and preventing shock which are applicable under all conditions and by any first-aid worker or doctor, and, moreover, they frequently suffice to restore a patient without resort to blood transfusion. The injudicious administration of which is not free from risk of fatality.

It cannot be too strongly emphasized, in my opinion, that the risk of septic infection from administering blood on the field of battle and in the street during an air raid is extremely great, and I have no hesitation in saying that blood or serum should not be given intravenously further forward than the advanced dressing station on the field of battle, the sick-bay where this is functioning adequately in a ship, and the first-aid post during an air raid. Moreover, there is, I think, a tendency to give large quantities of blood unnecessarily and wastefully: As a general rule, one pint should be administered fairly rapidly in cases of haemorrhage, and a further pint or possibly two by drip method; in the case of shock without haemorrhage, plasma or whole blood should be given by drip method alone and not run in rapidly, otherwise the risk of pulmonary oedema is very real.

It has been universally agreed that thorough removal of all damaged tissues as soon as possible after the infliction of a wound is essential in securing rapid healing, preventing infection, and ensuring quick return of the patient to health and utility as a fighting unit. It is also agreed that excision need only involve a narrow margin (at most 1/4 in. of skin) but that all damaged muscle must be carefully removed until contractile tissue, the vessels of which are spurting and not oozing, is reached. Furthermore, when this treatment has been carried out and adequate drainage ensured from the most dependent part of the wound, no primary suture is to be contemplated.

Notwithstanding, cases in which success has followed primary suture are from time to time reported in the medical journals; no mention is ever made in these articles of the number of cases so treated by the author in which infection, disaster, loss of limb, and even death have resulted. Primary suture of all such cases cannot be condemned too strongly; secondary suture can often be carried out with safety in a few days.

These are no new principles to have been learned, though in many cases they have been arrived at after painstaking work on the part of the surgeons and considerable suffering, doubtless, on the part of many patients. All of them emanated from the practice of surgery not only in the war of 1914-18 but in earlier wars. Even the closed-plaster technique, now universally accepted as the best treatment for all types of wounds in the field subsequent on excision, had its devotees and advocates (admittedly few in number) in the war of 1914-18, and even in the Crimean War, though all credit is due to Trueta, who popularized it during the Spanish War.

The dusting of wounds with sulphanilamide (5 to 10 g.) is advisable, both as a first-aid measure prophylactically against septic infection and as a routine after the excision of all wounds. So used, the sulphanilamide is seldom harmful provided that ample fluid intake can be assured to the patient; but it must be remembered that even with the treatment here advised, and more often when packing the wound with a mass of sulphanilamide has been resorted to, severe, even fatal, complications have occurred.

Special Types of Wounds

Abdominal Wounds.—Here early and rapid surgery is essential if life is to be saved, and in spite of advanced surgical centres and rapidity of transport it would appear, from the writings of Gordon-Taylor and conversations with surgeons whom I have met, that the mortality is about 50%, as in the last war, where owing to the static trench warfare such cases were more easily and quickly transported to an operating centre. The mortality from abdomino-thoracic wounds is distressingly high, and indeed is likely so to remain.

Thoracic Wounds.—As in the last war, the surgery of haemothorax from a penetrating wound is conservative, or by aspiration alone where pressure would induce cyanosis and respiratory distress, while in the larger lacerated wounds first-aid and front-line treatment to effect closure is safest and best carried out in the majority of cases by the application of a large and efficient dressing rather than by front-line surgery of a hurried and unsatisfactory type.

Facio-maxillary Wounds.—These should be treated in conjunction with a dentist and a facio-maxillary surgeon; and here the amount of bruising and the extreme disfigurement may suggest that the damage is far more extensive than is really the

case. Excision must be reduced to a minimum, and mucous membrane should be sutured to skin in every case when the services of a facio-maxillary surgeon are not immediately available. If the wound has disrupted the symphysis menti and detached the tongue, the tendency of this organ to fall back and suffocate the patient must be counteracted by pulling it well forward and, if possible, transfixing the tip with a stitch which should be hooked round the ear, holding the tongue in that position. All such patients should be carried, or should walk, stooping forward, and be instructed to insert the index finger down the throat and press the tongue forward should difficulty in breathing arise. Tracheotomy should never be necessary in these cases.

Peripheral Nerve Injuries complicating Lacerated Wounds.—It is now generally agreed that attempts at primary suture involving extensive dissection of tissues in recent wounds, especially where infection is present, are injudicious, but in cases in which the ends of the nerve are cleanly cut and easily accessible, and suture can be carried out without tension, primary suture should be performed even if there is a risk of infection. The earlier a nerve is sutured after its division the quicker and more complete will be the recovery of function.

Injuries of the central nervous system call for no special comment except that no prolonged search for buried foreign bodies should ever be undertaken in the front line, while drainage of the meningeal cavity is at all costs to be avoided.

Vascular lesions involving the great vessels are as a rule rapidly fatal, but one or two cases of suture of these vessels, and even of the heart itself, have been successful. Here, as in the last war, empyema is a frequent, and sometimes fatal, complication.

Fractures

Both simple and compound fractures are probably greater in number in proportion to wounds than was the case in the last war. The outstanding fact in all fracture cases is the delay in union which is occurring as compared with that war. The official view is that this is due to the severity of the disrupting force and the complexity of the accident causing the injury. I cannot help thinking, however, that the greater and more drastic manipulation of fragments which is taking place in order to secure perfect anatomical position is in some ways responsible for the delay in union, and it is questionable whether such drastic methods of reduction are justified in view of this delay and the functional result ultimately obtained. It cannot be too strongly stressed that in compound fractures the early excision of the soft muscle tissues is of more importance than the meticulous replacing of the bony fragments to obtain perfect alignment. In those cases in which damage to the great vessels of a limb accompanies severe compound fracture with extensive laceration of muscles, it is still best to amputate promptly if the patient's life is to be saved, and this applies especially if, in addition, joints have been laid open into the wound.

In through-and-through joint wounds expectant treatment is often justifiable, but this should be accompanied always by immobilization of the limb and extension applied to keep the bony surfaces of the joint separate. Moreover, a careful watch must be kept for the first signs of clinical effusion occurring in the joint, while aspiration of any appreciable effusion is necessary daily to ensure the free circulation of synovial fluid within the joint cavity.

Amputations have frequently to be carried out, and even in this war it is a sound principle to amputate in the first instance, leaving as long a stump as possible below the joint above the site of amputation. Subsequent amputations should be performed only through the upper third of a leg, the lower third of the thigh, the lower third of the arm and forearm; but one cannot help feeling that Syme's amputation has been abandoned more at the behest of the instrument-maker than at the discretion of surgeons; for one can recall many Syme's amputations performed in the last war which enabled the patient not only to continue in Army service but to march many miles without undue fatigue or to the detriment of the amputation stump. It is essential that after-treatment of an amputation should be carried out and the limb fitted by those accustomed to the work, and it is an excellent thing that all such are now undertaken by

the Ministry of Pensions, whose surgeons further ensure that amputees are taught to use their limbs properly.

Burns

It can be said truthfully that the treatment of burns has returned to chaos. It would appear that the Royal Navy, the Army, the Air Force, and the E.M.S. all have their own special problems, as the conditions under which these burns have to be treated differ considerably; the results obtained from the various methods are difficult to contrast, and it is therefore not easy to assess the value of any treatment except under special conditions. It is probable that the resulting chaos is due very largely to the inability—under war conditions—adequately to clean the burn and its surrounding tissues soon after its infliction. It is also probable that in many cases lack of experience contributes largely to the failure of certain lines of treatment which are successful elsewhere. Be that as it may, undoubtedly much work has to be done and a great deal has to be learned about the treatment of burns.

Generally, it can be laid down that the first-aid treatment of burns, certainly of severe ones, is a life-saving measure, and though the official Army treatment is vaseline or vaseline and a sulphonamide, one cannot help feeling that the method of tanning advocated as a first-aid measure by the Royal Navy has its place in the saving of life in severe burns. Sulphonamides dusted on burns in the early stages are liable, unless fluid is given in large doses, to be followed by severe toxic complications. Intravenous serum transfusion should be started early and be continued for prolonged periods by the drip method in all cases of severe burns, while it is an established fact that early skin-grafting, even in the presence of infection of a mild type, greatly facilitates healing and lessens scarring.

Blast

The results of blast are far more severe than those seen during the last war, and, owing to bombing, many more cases are coming under notice. Much has been written about the effect of this destructive element both on land and as a result of under-water injuries. Many fatalities have occurred, and the damage inflicted is in the nature of extensive haemorrhage and, in some cases, rupture of the lung and intestine. Treatment, except in those cases of hollow viscera or haemorrhage indicating operation, is rest and avoidance of movement as much as circumstances permit. It is far better to move such a patient well back in the early stages than submit him to several subsequent short moves.

Wound Infections

Apart from travelling with an extremely high velocity, fragments of shell and splinters of bomb are smoking hot and often cauterize the flesh at the point of entry, which place may be extremely difficult to detect from its small size and small burned area. Moreover, such projectiles are inclined to cut the clothes cleanly, and the tendency to force clothing material into the tissues is extremely small compared with that seen in the last war. For these reasons, surely infection should be less severe than in previous wars, but this does not mean that it is not to be both expected and counteracted in every wound.

Sulphonamides.—Infection of wounds has been much modified and the terror greatly reduced by the introduction and early use of the sulphonamide group of drugs. It is not suitable in an article of this nature to enter into details of such treatment, particulars of which can be obtained from the Medical Research Council War Memorandum (1943) and the works of Colebrook and other authors. I must, however, sound a note of warning against the excessive and indiscriminate use of these drugs, which are by no means without risk. Many patients show an idiosyncrasy to drugs of this group, while certain organisms react only to certain types of them. It is essential, therefore, that treatment be carried out in close co-operation with a bacteriologist. Moreover, any dosage over 15 g. applied externally may produce toxic and even fatal results, even in cases where the fluid intake can be kept up by both intravenous and oral administration for two to three days subsequent to the use of the sulphonamide. In this respect attention is drawn to the value of the simple test advocated by Fuller (1942), which is accurate enough to serve as a guide that the requisite blood

concentration of sulphonamide has been reached. Remember that the sulphonamides, far from constituting a panacea for all infections, may be actually deleterious and even dangerous, and as a general rule their use should be discontinued promptly in cases which show no constitutional improvement or fall of temperature in 48 hours.

Penicillin.—It seems certain that in its effects against sepsis due to certain organisms penicillin far surpasses all other anti-septics. It is non-toxic to the patient, and one can assert confidently that its future use is likely to be extensive and very successful. Its action is most dramatic on the staphylococcus and gonococcus, and it is not without effect, especially in combination with sulphathiazole, on most streptococci, meningococci, and some types of pneumococci, as well as the clostridia of gas gangrene, *B. tetani*, and anthrax and other Gram-positive bacilli. It has, however, no potency against, and is indeed apparently destroyed by, the Gram-negative bacilli of the *B. coli-typhosus* group. It is obvious from this fact that the drug can be used only in close association with a bacteriologist unless discredit is to ensue. Furthermore, from the surgeon's point of view it would appear that its use will entail a drastic revision of surgery of wounds; for penicillin acts at its best in a puddle of pus, and in cases in which it is applied locally—the most economical and satisfactory way of using it in wound surgery—it seems that drainage will have to be avoided.

Tetanus.—Thanks to the prophylactic and regular use of tetanus toxoid, and the possibly unnecessary prophylactic injection of antitetanus serum in the case of severe wounds—perhaps only unnecessary in those cases where three or more doses of tetanus toxoid have been administered—tetanus is a disease of which we have seen little in this war, and in the few cases which have occurred it has been only of a mild and often non-fatal type.

Gas gangrene has also occurred less frequently and on the whole less virulently than in the last war, possibly because of the nature of the country in which most of the fighting has taken place. To be of prophylactic value, anti-gas-gangrene serum and sulphonamides must be employed immediately after the infliction of the wound; they seem to have little value if employed later and next to no value if the disease is established. It cannot be too strongly emphasized that adequate excision (especially of all damaged muscle) of a wound in the early stages after its infliction is the best prophylactic against all types of this infection. Credit is due to J. D. MacLennan (1943) for his excellent article on the clinical characteristics of the infections resulting from the various anaerobic clostridia and streptococci.

Rehabilitation

Rehabilitation is a new word to many of the profession, who have been all too prone to patch up a case in hospital and take no further interest in its progress or to ascertain whether the patient is fit to return as a working unit in the national effort. The shortage of man-power has directed attention to the necessity for restoring every patient possible to full working capacity in the shortest time. To this end rehabilitation has appeared—indeed, become popularized—and has come to stay. Active rather than passive exercise, mental occupation, and stimulus play an important part in the return of the patient to full work, and it cannot be too strongly emphasized that the psychological outlook of every patient is as important as his physical re-education. The psychiatrists, by-product of the necessities of the war, have come in for much undeserved—and some deserved—criticism, but their value in the war effort is undoubted, and their future as a specialist branch of the profession is assured.

Venereal Disease

A word should be said of the treatment of venereal disease. The introduction of sulphonamides has so simplified both the cure and the time taken to effect it in the case of gonorrhoea that the vast majority of cases of this disease can be treated safely and satisfactorily as out-patients and a cure be assured in a few days.

Syphilis continues to be a problem in regard to treatment, and the large number of cases of jaundice following the administration of arsenical compounds show that none of these drugs is ideal in the treatment of this distressing malady; while the

conditions consequent upon war and the movement of the bulk of the population make it difficult to follow up and to administer efficient treatment to many of the infected cases—a fact which must have a deleterious effect on the health of members of the community born and yet to come.

The war has produced a very authentic and connected description of lymphogranuloma inguinale, for which we are indebted to Stammers (1943).

Anaesthesia

I would like to add a word in praise of the anaesthetists, who are doing a magnificent work to assist their surgical colleagues in all parts of the world. Many forms of anaesthesia are practised and advocated, and on the whole the majority are satisfactory in the experience of the surgeons for whom and of the patients to whom they are given.

Conclusions

An endeavour has here been made to assess the value of surgery in the past four years of war and to draw such conclusions as may be possible as to where ground has been gained, or possibly lost, in comparison with surgery as practised in the war of 1914–18. It would appear, by and large, that surgical procedure has not altered greatly, though the type of wound has altered somewhat owing to the use of more lethal explosives and missiles.

On the whole it seems that my surgical colleagues have reason to congratulate themselves on the work they are doing, but have no grounds for halting or feeling complacent in this world-wide struggle, not yet concluded.

I wish to thank my colleagues on the staffs of many E.M.S., Naval, Military, R.A.F., and Allied hospitals, who have received me with much kindness and courtesy on the many occasions on which I have visited them.

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NEUROPSYCHIATRY AT A ROYAL AIR FORCE CENTRE

AN ANALYSIS OF 2,000 CASES

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This centre is situated in a large R.A.F. station and also provides neuropsychiatric out-patient service on a regional basis for R.A.F. and W.A.A.F. personnel from surrounding stations of Technical Training, Flying Training, and Operational Commands, together with the associated R.A.F. hospitals within the area of its regional distribution. The proportion of air-crew cases coming direct from Operational Commands is low, being less than 15% of our series.

Hospital Facilities

Beds are available at the Centre for the observation of cases of psychoneurosis, psychosis, and psychopathic conduct disorder before disposal by return to duty, admission to hospital, or invaliding. Facilities are also available at neighbouring R.A.F. hospitals for in-patient investigation of organic neurological cases, while these hospitals are visited regularly for consultation, as many cases are admitted to them with symptoms which require psychiatric investigation before making a psychotherapeutic approach to their problems. Of such cases, the nervous dyspepsias, and the indefinite headaches vaguely attributed to ear, nose, and throat conditions, are numerous enough to be worthy of special mention.