The Journal of Bone and Joint Surgery

HIS MAJESTY THE KING

A hand-bound copy of the first British volume of the Journal of Bone and Joint Surgery was presented to His Majesty the King by members of the British Orthopaedic Association, Canadian Orthopaedic Association, Australian Orthopaedic Association, and all the orthopaedic surgeons of the Commonwealth of British nations, together with an expression of their loyal appreciation of the King's interest, and his approval of their close collaboration with surgeons of the United States of America. We are privileged to publish His Majesty's gracious reply.

All surgeons of the English-speaking peoples join in expressing their sympathy with the King in his serious illness, and in acknowledging the indomitable spirit with which he faced disability and associated himself, in his Christmas message, with those of his subjects who are also disabled. It is with great relief that we learn of the progress which has been made; and it is our sincere trust that His Majesty's recovery may be rapid and complete.

EDITOR.

BRACHIAL PLEXUS INJURIES

In 1864 Weir Mitchell published his account of a systematic study of the nerve injuries of warfare. There were "about 120 cases, all of which have been carefully reported in our notebooks during the past year. No labor has been spared in making these clinical histories as perfect and full as possible. Those only who have devoted themselves to similar studies will be able to appreciate the amount of time and care which has been thus expended. We indulge the hope that we shall leave on record a very faithful clinical study of nerve injuries, and that we shall have done something at least towards lessening the inevitable calamities of warfare." The time has again come when British workers in the same field are making similar contributions, with the difference that records are now numbered by thousands, and that workers in different centres have achieved remarkable uniformity of documentation.

In this number of the Journal, D. M. Brooks gives the most complete report that has yet appeared of the end-results of open wounds of the brachial plexus. On account of the complexity of the nerve trunks involved, a special method of grading recovery had to be devised; it has been successful in that it gives the careful reader a clear picture of what happens. The most striking finding is the rarity of anatomical interruption. It may be presumed that, owing to proximity of the great vessels of the limb, only men with comparatively benign injuries survived. Recovery after a lesion in continuity of C.5 and 6, or of the posterior cord, was usually most satisfactory; but even where exploration showed an apparently favourable lesion of C.8 and T.1, or of the medial cord, recovery in the small muscles of the hand was usually so poor as to be useless, and no better in the three cases where surgical repair was undertaken. The survey has thus led to an important practical conclusion: that, with one exception, nothing was gained from exploration of a brachial plexus injured by an open wound. The exception was a lesion involving C.5 and 6—where repair of a divided upper trunk may be worth while.

Many cases of traction injury of the plexus were seen during the war, and in these days of high-speed road transport such injuries have a permanent interest. Barnes describes his findings in sixty-three cases; and Kerr has added an interesting note on two cases in which the cervical plexus was also involved. Hitherto, these injuries have been regarded with

profound pessimism; and treatment has been perfunctory, with the result that joint stiffness has been allowed to occur with depressing frequency. Yet Barnes has shown that when conservative treatment was carried out thoroughly, and over a long period, there was surprisingly good return of function after many lesions of the upper three roots. As after open wounds, recovery in the muscles of the hand after damage to C.8 and T.1 was poor. Lesions involving the whole plexus never recover completely; and the presence of a Horner's syndrome is a bad sign. In the early days of the war there was much talk of benefiting these cases by early exploration. It was supposed that recovery might be hindered by extraneural scarring; and because late operation had been a failure it was thought that early exploration might, in some vague way, succeed. But Barnes points out that extraneural scarring is incidental and that, as in traction lesions elsewhere, the significant damage is intraneural fibrosis. There could hardly be a more striking demonstration of the slow and delayed influence of this scarring than Penfield's case in which after thirty-seven years it began to affect the spinal cord itself.

Barnes is strongly and justifiably in favour of conservatism. There is, nevertheless, an occasion when exploration may be useful. If there is complete brachial plexus paralysis, an exploratory operation will show whether the plexus is still in continuity or is completely disrupted—if the latter then no time need be wasted on conservative treatment. Bateman has contributed a valuable note on an approach to the plexus that is facilitated greatly by placing the patient in the sitting rather than in the supine position.

No account of brachial plexus paralysis is complete without reference to the reconstructive measures that are often required in the treatment of residual paralysis, and Hendry has contributed an account which is based on very wide experience. He is opposed to amputation even of a completely paralysed part. Perhaps, before long, there may be opportunity to compare the results of his staunchly conservative surgery with those of amputation, and the fitting of a modern artificial limb. He begins, appropriately enough, with the paralysed hand and describes a number of useful operations for activation of the fingers. He is less sanguine about tendon transplantation for paralysis of the thumb and places more reliance on arthrodesis, sometimes combined with a flying buttress between the first and second metacarpals to hold the thumb in palmar abduction. But Hendry's conservatism is full of surprises and he has no hesitation in challenging the value of conservative procedures which are commonly accepted. While not condemning arthrodesis of the wrist joint he regards this operation as of limited value and often inferior to his ingenious flexor-extensor tenodesis. Again, in choosing the position of the forearm he prefers full supination for the patient with a flail hand though he agrees that the mid-position is better cosmetically. Having dealt with the hand he tackles the elbow by means of a posterior bone block, an operation that he has performed twenty-one times; in nine cases the limb was completely flail. He makes out a good case for this novel procedure.

No two paralysed arms are identical. It is difficult to formulate rules that can be applied to every case, and Hendry has not succeeded in doing so. What he has done is to impress on his readers the necessity for careful analysis not merely of the extent of paralysis but of every concomitant joint contracture; only then can the operative procedures, arthrodesis, tenodesis, tendon transplantation, and bone block of joints be deployed in the right combination and in the right order.

H. J. SEDDON.

ROWLEY BRISTOW MEMORIAL FUND

The Rowley Bristow Memorial Fund will be closed very shortly. It is proposed to establish a lectureship, or a student scholarship, by which to perpetuate the memory of a great British orthopaedic surgeon who was respected no less in the United States of America than in Great Britain. The attention of readers is called to a letter, in the correspondence columns of this number of the Journal, from Professor George Perkins. EDITOR.