

APPROACH TO THE MEDIAN NERVE IN THE FOREARM.

By ADAMS A. McCONNELL, DUBLIN.

EVERYONE who has operated on a nerve embedded in a cicatrix acknowledges the difficulty of differentiating the nerve fibres from the scar tissue, and an attempt is always made to expose the nerve above and below the affected

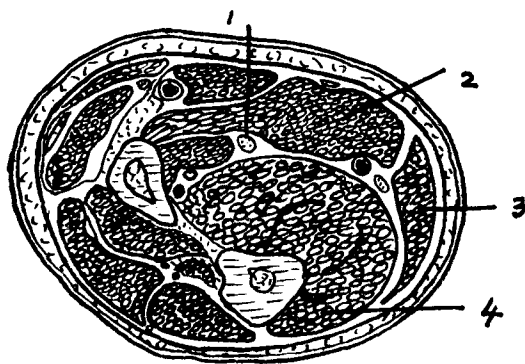


FIG. 1.

1. median nerve. 2. flexor sublimis digitorum.
3. flexor carpi ulnaris. 4. flexor profundus digitorum.

segment. In some cases the scar tissue involves the nerve trunk for several inches.

Wide exposure is, therefore, essential, and it must be carried out with due regard for the integrity of muscles. Especially is this necessity apparent in the forearm where incisions through muscles may produce actual limitation of function or any resulting adhesion may serve as an excuse for alleged disability. Insignificant operative insult may exaggerate or create hysterical paralysis.

It has been my lot to expose the median nerve in the forearm both for recent gunshot wounds and for those of long standing, and for the last four years I have found

that the method of approach described below gives a good exposure of the nerve for the greater part of its course, and that no muscular fibres require division.

A section through the middle of the forearm (fig. 1) shows that the nerve lies between the superficial and deep muscular layers of the forearm, and that a direct approach from the anterior aspect entails division of the flexor digitorum sublimis muscle. The simplest method of reaching the plane between the superficial and deep muscular

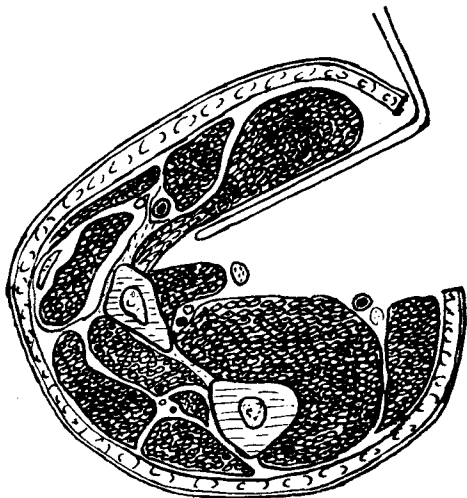


FIG. 2.

groups is to make an incision along the free border of the flexor carpi ulnaris muscle. On retracting this muscle the interval between the flexor sublimis and flexor profundus muscles is immediately exposed.

The ulnar artery and nerve are seen lying on the flexor profundus. A retractor is then inserted deep to the flexor sublimis, and the muscle drawn anteriorly and laterally, thus exposing the median nerve in the greater part of its course in the forearm (fig. 2). With full flexion of the wrist the nerve lies easily accessible down to the transverse carpal ligament.

The superficial incision extends along the lower two-

thirds of the line joining the medial epicondyle of the humerus to the lateral side of the pisiform bone. It must be long in order to allow free retraction of the flexor carpi ulnaris. Except in the rare case in which the plane of scar tissue in the forearm corresponds to the plane of this incision one approaches the median nerve through normal tissues. The plane of scar tissue involving the nerve usually runs antero-posteriorly, so that one approaches it from the side, and, consequently, can identify the nerve fibres more readily.

An incision from in front would have more scar tissue to negotiate. The facility with which a long incision can be made in this situation renders it easy to expose the nerve above and below the affected segment.

The presence of other lesions, the distribution of cicatricial tissue and other considerations will of course modify the indications for this method of approach, but, in the majority of cases, it is easier, quicker and safer to expose the median nerve in the forearm by this ulnar incision than by the orthodox method.