DISLOCATION OF THE WRIST JOINT

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SUMMARY: A case of radio-carpal dislocation with both ulnar and median nerve involvement is presented.

Injury to the wrist joint region is very common but dislocation is rare. Most injuries involve fracture or dislocation of the bones which enter into the formation of the radio-carpal joint and include anterior or posterior marginal fractures of the radius, fracture of the distal radius (Colles), fractures of the ulnar and radial styloid processes, fracture of the scaphoid, dislocation of the lunate and other less common lesions.

A case is described in which the radio-carpal dislocation was almost "pure" with only a small avulsion fracture of the radial styloid, and in which both ulnar and median nerves were involved.

Case report

The patient was a strongly-built soldier aged nineteen years, who, whilst weight-lifting, fell backwards during an upward press. He presented with gross swelling of the right wrist and "dinner fork" deformity. He had numbness in the distribution of median and ulnar nerves. X-rays showed dorso-lateral dislocation at the radio-carpal joint with a marginal fracture of the radial styloid (Figs 1 and 2). Reduction under general anaesthetic was easy (Figs 3 and 4). Median nerve symptoms settled rapidly but diminished sensation persisted in the ulnar nerve distribution; gradual recovery took place over the next six days.

Discussion

Watson-Jones (1960) describes and illustrates dislocation of the radio-carpal associated with fracture through the base of the radial styloid. The carpus is driven backwards and outwards against the radius but the impact is transmitted by the scaphoid and the fracture enters the joint between scaphoid and lunate. In the case described the fracture is marginal. Campbell (1963) recognises radio-carpal dislocation and describes the operative management of old unreduced ones. No other references have been found.

The wrist is a strong, flexible joint, like the knee, and simple dislocation is rare. Most injuries in the region are associated with fractures involving the distal small carpal bones or the proximal "bone-block" of the radius. The ulnar and radial collateral ligaments are strong, and with the dorsal and palmar ligaments and the flexor and extensor tendons, are responsible for the stability of the joint. Bony configuration contributes very little (Figs 3 and 4). In the case described all ligaments must have been torn, the radial collateral avulsing the tip and radial margin of the styloid, at its proximal attachment. With dorso-lateral displacement both median and ulnar nerves were stretched and compressed. Early reduction relieved this and the rate of recovery showed the lesion to be neurapraxia only.

Figs. 1 and 2. Pre-operative X-rays dislocation of wrist.

Figs. 3 and 4. Postoperative X-rays.

Damage to median and ulnar nerves at wrist level is not uncommon in cuts and stab wounds when division may be partial or complete. The median nerve may be compressed in the carpal tunnel in such conditions as dislocation of the lunate, radio-carpal arthritis or old fractures, tenovaginitis, acromegaly, myxoedema and toxæmia of pregnancy. Pain, paraesthesia or sensory loss are the presenting symptoms and are relieved by division of the flexor retinaculum. The ulnar nerve lies superficial to the retinaculum, on the radial side of the pisiform and hook of the hamate and protected by a superficial extension of the retinaculum. It may be compressed here by a ganglion or other local pathology. The dorsal cutaneous branch arises in the forearm, passes backwards below the ulnar styloid process and across the medial surface of the triquetrum to gain the dorsum of the hand. Sensory loss was present in its distribution in the case presented. The degree of deformity (Figs 1 and 2), along with the traumatic swelling, was sufficient to produce temporary loss of conduction in both median and ulnar nerves.

REFERENCES

- CAMPBELL, W. (1963). *Operative Orthopaedics*, 2, p. 349. C. V. Mosby & Co. St. Louis.
 WATSON-JONES, R. (1960). *Fractures and Joint Injuries*, 2, p. 597. E. & S. Livingstone & Co. Ltd., Edinburgh.

Adviser in General Practice to the Army

Colonel C. McNeil, O.B.E., M.B., late R.A.M.C., has been appointed Adviser in General Practice to the Army.

This is a new appointment, on a part-time basis, and in addition to his normal duties the holder will be required to advise the Director of Studies, Royal Army Medical College on matters concerning the training of general practitioners in the Army and to establish a close liaison with the Honorary Consultant in General Practice to the Army, Doctor J. Fry, M.D., B.S., F.R.C.S., and with the Royal College of General Practitioners.

He will also be available to advise Army General Practitioners on their professional problems and may communicate directly with them on such matters in the same way as Specialist Consultant Advisers communicate with their Specialists.

Although the appointment will be chiefly concerned with training, advice will be given to the Director-General of Army Medical Services on all matters affecting the organisation and standards of general practice in the Army.

At present, Colonel McNeil is the Senior Medical Officer, The Royal Military Academy, Sandhurst.