SELECTIVE CONTRACTURE OF THE FLEXOR DIGITORUM SUBLIMIS MUSCLE TO THE RING FINGER

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A twenty-two years old girl complained of progressive inability to extend the ring finger of the right hand for one year. The condition started with pain in the region of the right elbow, extending two or three inches below the medial epicondyle. The pain subsided within a few weeks but the patient developed a flexion contracture of the right ring finger, which could be extended only on full flexion of the wrist. There was no history of injury or of other illness.

On examination, the only remarkable findings were in the right ring finger and forearm. With the wrist in the mid-position the patient could not extend the ring finger beyond 90 degrees at the middle interphalangeal joint (Fig. 1), although the other fingers could be extended fully. Extension of the ring finger by passive movement could be accomplished only when the wrist was completely flexed, and at the same time a tense cord-like elevation was felt in the forearm between the medial epicondyle and the wrist which relaxed completely when the ring finger was allowed to flex.

The position of the distal interphalangeal joint was not altered even when the wrist joint was fully extended, although this movement caused acute flexion of the proximal interphalangeal joint. There was no radiographic evidence of abnormality in the elbow joint, and routine blood studies and urine examination were normal. A diagnosis was made of chronic myositis with fibrosis of the flexor digitorum sublimis muscle to the ring finger.

Operation—Under local anaesthesia the proximal third of the cord-like structure in the forearm was exposed, this being facilitated by keeping pressure on the finger to produce tension. The cord-like structure was found to be part of the flexor digitorum sublimis muscle; it was severed with the scalpel. The finger could then be extended easily to the same degree

Fig. 1
Condition before operation.
as the other fingers (Fig. 2). Part of the contracted tissue was resected and sent for pathological examination.

Histological examination showed dense collagenous connective tissue with many elongated fibroblast-like nuclei. Only a few striated muscle fibres were seen. Most of this section showed dense collagenous tissue resembling tendon.

Progress—The patient regained full function of the finger. So far there has been no recurrence of deformity and no involvement of other muscles.

Comment—The nature of this case is obscure. Localised contracture of one part of the group of forearm muscles has sometimes been observed in Dupuytren's contracture. More probably the changes here represent a fibrositis, and the origin might have been a fasciitis and epicondylitis such as occurs in tennis elbow in the origin of the extensor muscles. The pathology of inflammation of the fascia and of the adjacent origin of the flexor group of muscles of the forearm led to fibrosis of the rest of the muscle fibres to the ring finger. The selectivity of the process to one localised group of fibres is the interesting phenomenon for which reason this case is reported.