A LOCKED INDEX FINGER

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Injury to the ligaments and capsule of the metacarpo-phalangeal joints of the fingers is common. The following case, in which the metacarpo-phalangeal joint of the index finger was locked in a manner not previously described, was considered worth recording.

CASE REPORT

A thirty-one years old butcher injured his hand while attempting to catch a lamb: he grasped a leg with each hand but the lamb struggled and he lost his grip with the left hand. The leg slipped between the index and middle fingers, forcing the index into flexion and ulnar deviation. He felt a painful "snap" on the radial aspect of the metacarpo-phalangeal joint and was unable to straighten the finger.

When he was first seen a week after injury the left index finger was held in a position of 40 degrees flexion at the metacarpo-phalangeal joint (Fig. 1). Flexion of the finger was

FIG. 1

The index finger in the locked position.

full and painless. Attempts to straighten the finger actively or passively were prevented by a rigid resistance in the metacarpo-phalangeal joint which produced slight discomfort. The joint was stable. Radiographs were normal. It was decided to explore the joint.

Findings at operation—Preliminary manipulation under anaesthesia showed the block to extension to be as rigid as before. The joint was opened on its ventral and radial aspects. A tear was found in the capsule, the proximal part of which had retracted and rolled up into a tight band which was caught round the metacarpal head (Fig. 2). When attempts were made to straighten the finger the band became tighter and prevented full extension of the

metacarpo-phalangeal joint. With the joint flexed the tight band could be pulled out from its trapped position and the joint easily straightened. By tucking it back round the head of the metacarpal the rigid locking was reproduced. The defect in the capsule was closed by two catgut sutures and the finger was immobilised in plaster for three weeks. Five weeks after operation function was full and the patient returned to work.

FIG. 2

Showing the tear between the two parts of the collateral ligament. The proximal part had rolled upon itself and was caught round the head of the metacarpal.

DISCUSSION

The lateral and medial ligaments of the metacarpo-phalangeal joints consist of two parts. The dorsal part is rounded and cord-like and is attached eccentrically to the metacarpal head. It is slack in extension and taut in flexion; hence the fingers cannot be spread unless the hand is open. The ventral part is thinner and fan-like and extends across the front of the joint as the palmar or volar accessory ligament to become continuous with its fellow of the opposite side. It may be thickened on its ventral aspect to form a fibrocartilaginous plate.

In this case the tear was between the cord and the fan as shown by the dotted line in Figure 2. The fibrocartilaginous plate could not be demonstrated. The fan and the palmar ligament appeared as a thickened band rolled upon itself in the displaced position. When freed and stretched across the front of the joint the thin flat band of the fan could be demonstrated. The position was such that manipulation could not have unlocked the joint.

I am indebted to Mrs J. Richardson for the drawings, and to Miss D. Marshall for the clinical photograph.