FRACTURES OF THE ULNAR STYLOID.

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FRACTURE of the styloid process of the ulna as a single lesion is not common; it, however, occurs very frequently associated with a Colles's fracture. Three cases of fractures of the styloid have been treated in the surgical unit of King's College Hospital during the past year. It is largely owing to the more extended use of X rays in the elucidation of injuries of the wrist that these fractures are more frequently seen. Todd¹ points out that it is only since the advent of X rays that fractures of the carpal bones have been recognised at

all. In fact, it may be said that prior to the year 1900 there was practically no literature on the subject. Fractures of the styloid process of the ulna and fractures of the carpal scaphoid were no doubt diagnosed as "sprains of the wrist."

An X-ray plate should be taken as a routine in the examination of all cases of injury in the region of the wrist, for it is only by this means that many obscure cases will be diagnosed correctly.

The causation of these fractures is generally direct violence, in some cases there is a history of a twist.

FIG. 1.—(Antero-posterior view.)
Skiagram taken ten days after accident, showing fractured
styloid process of ulna.

In cases seen soon after the injury there is some œdema and swelling over the lower end of the ulna. Tenderness is not so marked as in cases of fracture of the carpal scaphoid. There is, as a rule, some limitation of dorsiflexion of the wrist. Crepitus is not obtainable.

In late cases the swelling may have disappeared, but some tenderness can usually be elicited, and the radial styloid process is generally at a lower level when compared with the other hand (see Fig. 3).

With regard to treatment, as soon as the diagnosis is made the hand should be put up for about three weeks on a "cock-up" splint in dorsi-flexion with slight ulnar deviation. After this, when firm bony union is obtained, massage with the splint *in situ* can be employed for another week, when the splint may be discarded.

The following is a short description of the three cases which came under observation :—

Case 1.—E. F., male, aged 44 years, an engineer. While soldering an empty motor petrol

FIG. 2.—(Postero-anterior view.)
Skiagram taken three months after accident. Fracture of ulnar styloid firmly united.

FIG. 3.—(Antero-posterior view.)
Before operation. Ununited fracture of styloid process of ulna.

FIG. 4.—(Postero-anterior view.)
After operation. Styloid process of ulna has been excised.

FIG. 5.—(Antero-posterior view.)
Old standing fracture of styloid process of ulna. The tip of the styloid is completely detached and appears as an isolated nodule.

tank, the latter exploded knocking him over, and he fell on the ulnar side of his wrist. He was treated for a sprained wrist for ten days, and as the pain in the wrist did not disappear he was

X-rayed (Fig. 1). The skiagram shows a fracture through the base of the styloid process of the ulna; there was no other bony injury to be seen. The hand was put up on a "cock-up" splint with slight ulnar deflection for three weeks. Massage was then instituted for a week, when he returned to work. An X-ray (Fig. 2) taken later shows good apposition and bony union. He has been at work for the last four months and has no pain or disability.

Case 2.—L. M. S., female, aged 27 years; violently twisted her right wrist while playing tennis. This was treated as a sprain for six months, and at the end of that time she came up to King's College Hospital, complaining of pain in the wrist joint, and stated that her grip was not so good as formerly and that she could not play tennis. On examination, there was some deep-seated tenderness over the lower end of the ulna. An X-ray was taken (Fig. 3), which revealed an ununited fracture of the ulnar styloid with displacement outwards. Operation was advised. The styloid process was excised through a small incision over the inner side of the lower end of the ulna, and a false joint was found to have formed between the lower end of the ulna and its styloid process. The hand was put in plaster in dorsi-flexion for three weeks. Patient was seen after eight months, when another skiagram was taken (Fig. 4). There was no pain or disability whatsoever, and the patient stated she had played tennis all through the summer without any inconvenience or discomfort.

Case 3.—J. W., female, aged 19 years, came under observation complaining of pain in the right wrist. She said that six years previously she fell on her right hand and sprained her wrist, for which she received no treatment. On examination, there was no sign of swelling about the wrist, but on ulnar deflection pain was produced. It was noted that the styloid process of the ulna was on a lower level than that of the radius. X-ray examination revealed a partial fracture of the styloid process of the ulna; the fragment had separated and appeared as a small round nodule lying between the lower end of the ulna and the cuneiform bone. There must have been an injury to the lower radial epiphysis at the time of the accident, six years previously, which accounted for the difference in levels of the two styloid processes. In this case operation was not undertaken, but the hand was immobilised on a "cock-up" splint for six weeks. Pain has disappeared, but it is too soon to say that a cure has been obtained. It may be necessary at a later date, should pain return, to excise the isolated nodule.

The actual diagnosis in these cases could not have been made with certainty without the use of X rays.

REFERENCE.

- ¹ A. H. Todd. "Fractures of the Carpal Scaphoid," *Brit. Jour. Surg.*, July, 1921.
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