CLICKING ELBOW FROM A TORN ANNULAR LIGAMENT

Report of a Case

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A married woman aged forty-four years attended in 1954 with pain of sudden onset in the right elbow. The pain was made worse by exercise. On examination, there was diffuse tenderness over the common extensor muscles at the joint level. A click was noticed on flexion and extension movements: it seemed to occur in the lateral part of the joint. There was a full range of elbow movement. Radiographs of the elbow did not show any abnormality. A diagnosis of tennis elbow was made, but histamine ionisation, injections of hydrocortisone and short-wave diathermy over a period of four years failed to relieve the symptoms. Indeed the clicking became more obvious and exploration was advised.

At operation, the elbow was exposed through a lateral incision. Inspection of the flexed joint did not show any abnormality. On extending the joint a band of tissue was seen to slip over the anterior margin of the radial head so as to lie in the radio-humeral joint. The movement of this band of tissue, which occurred slightly below the right-angled position, was accompanied

FIG. 1

FIG. 2

FIGS. 1 AND 2

Figure 1—A lateral view of the extended right elbow. The detached part of the annular ligament is seen end-on lying between the capitulum and the radial head. Figure 2—Diagram showing the detached part of the annular ligament in its displaced position.

by a clearly audible click. Flexing the elbow resulted in a further click as the band of tissue slipped out of the radio-humeral joint. The slipping fragment was found to have been torn from the main part of the annular ligament in "bucket handle" fashion, remaining attached to the main part of the ligament at each end (Figs. 1 and 2). The separated band of fibres was about half an inch (1.25 centimetres) in length. Excision of the mobile fragment of tissue abolished the clicking. No other abnormality of the joint was seen.

Progress—The arm was rested in a sling for a month after operation. Six weeks after operation a full range of painless movement was present and the symptoms were completely relieved. Six months later there has been no recurrence of the clicking.

DISCUSSION

The annular ligament of the superior radio-ulnar joint is attached anteriorly and posteriorly to the radial notch of the ulna. Fibres of the annular ligament encircle the radial head, those below being shorter so as to prevent distal displacement of the radius upon the ulna. The annular ligament ends above by blending at the margin of the radial head with the anterior part of the joint capsule.

In this patient a part of the annular ligament lying anteriorly and proximally became split off from the main part, while remaining attached at its extremities so as to form a "bucket handle." The cause of this separation is not evident. Although the patient denied any injury to the joint, it is possible that a blow on the antero-lateral aspect of the elbow in right-angled flexion could have split off the band of tissue seen at operation. With the elbow in this position the radial head can be palpated clearly, the overlying extensor muscles being displaced medially so that the annular ligament becomes relatively vulnerable. In the case described the elbow was otherwise normal, and injury is the most likely explanation of the lesion found at operation.

When the elbow is extended, tightening of the anterior capsule tends to pull the annular ligament proximally. This caused the separated band to slip over the radial head into the radio-humeral joint space. Flexion of the joint, by releasing tension on the annular ligament, allowed the displaced fragment to slip back into its normal position.

SUMMARY

A case of "clicking elbow" is described in which at operation the clicking appeared to be due to a "bucket handle" type of lesion of the annular ligament. Excision of the separated part of the ligament abolished the clicking.

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