

Clinical case

Chronic elbow dislocation: a rare complication of tennis elbow surgery. Successful treatment by open reduction and external articular distractor

Luxation du coude. Complication exceptionnelle après traitement chirurgicale pour épicondylalgie

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Abstract

A case is presented of chronic dislocation of the elbow after tennis elbow surgery combined with posterior interosseous nerve (PIN) release. An open reduction with repair of the collateral ligaments was performed. Postoperative rehabilitation involved the use of an articulated external fixator and there was a successful outcome. Possible causes of the dislocation are discussed.

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Résumé

Un cas clinique est présenté, avec une luxation du coude ancienne, après traitement chirurgical pour épicondylalgie et neurolyse du nerf interosseus postérieur. Une réduction chirurgicale et rééducation avec un fixateur externe dynamique a été faite et le résultat était parfait. Les causes possibles de la luxation sont discutées.

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Mots clés : Coude ; Luxation ; Épicondylalgie ; Fixateur externe

1. Introduction

Tennis elbow or lateral epicondylalgia is a common problem of the upper extremity, which causes considerable morbidity. There is little agreement in the aetiology of this condition and many treatments have been advocated in its management. When conservative treatment fails, surgical release and debridement of the extensor origin is attempted. If the patient complains of associated chronic aching muscle pain in the proximal dorsal forearm, with pain on palpation of the radial tunnel, surgical decompression of the posterior interosseous nerve (PIN) under the supinator can give relief of the

symptoms. We report a case where tennis elbow surgery combined with PIN decompression led to late diagnosed elbow dislocation.

2. Case report

A 45-year-old, healthy, right-hand dominant housewife presented at our hospital with a disablingly painful right elbow. She had undergone surgical treatment for lateral epicondylitis 3 months earlier in another hospital, after failed conservative treatment with corticosteroid infiltrations. Preoperative radiological elbow evaluation was normal. A debridement of the common extensor origin was combined with a PIN decompression through a lateral approach. For reasons of pain, 4 weeks of cast immobilisation in 90° of elbow flexion was applied after the

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surgical procedure. No instability was mentioned by the surgeon. The patient mentioned a stiff elbow after this and physiotherapy was started. The elbow remained painful, swollen and stiff. Eight weeks after surgery, a manipulation under general anaesthesia was performed because there was no improvement in the range of elbow movement. We first saw her 11 weeks postoperatively with severe swelling and a painful immobile elbow (Fig. 1A). Radiographs revealed a complete posterolateral dislocation of the elbow (Fig. 1B).

Surgical treatment was proposed. An orthopaedic reduction of the dislocation under general anaesthesia with fluoroscopic evaluation was attempted before incision, but proved to be impossible. Consequently, the patient was installed in a lateral decubitus with arm support. A posterior approach to the elbow joint was done, using the Van Gorder posterior triceps reflecting approach with posterior inspection of the elbow joint. In order to achieve a greater exposure of the elbow joint, the medial and lateral condyles were subperiostally dissected, releasing both the medial and lateral disrupted ligaments which were found to be embedded in posttraumatic fibrotic scar tissue [1, 2]. Using this method, a full symmetrical elbow joint reduction was achieved with reduction of the proximal insertions of both collateral elbow ligament complexes by soft tissue suturing of periosteum, triceps muscle and tendon in layers after placing an external fixator. The dynamic joint distractor II (Stryker Howmedica Osteonics[®], Mahwah, NJ) was applied in a bilateral configuration to start an early and stable mobilisation (Fig. 2). The humeral axis pin of this Mayo Clinic device was placed on the medial and lateral side with direct visualisa-

tion of the centres of rotation. The frames were applied over the pins and the bilateral fixator was installed. The axis pin was removed and a stable full range of motion was confirmed. As mentioned before, the soft tissues were then closed in layers reducing the collateral ligament complex. The patient noted an immediate pain relief compared to the preoperative situation. Full range of motion exercises was started the day after surgery. Five and a half weeks later the external fixator was removed under general anaesthesia, and elbow stability was evaluated under fluoroscopy. Minimal lateral instability was noted in 60° elbow flexion, with normal stability in extension. Physiotherapy was continued and an uneventful recovery followed. At the last follow-up evaluation 2 years postoperatively, the patient was fully satisfied. She had no pain with a good mobility, normal pro- and supination, full flexion and 15-extension lack (Fig. 3A). There were no clinical signs of elbow instability. There was a normal elbow articulation on X-ray (Fig. 3B). She complained of a tennis elbow at the contra lateral elbow joint, which was treated conservatively.



Fig. 1. The patient presented with a painful immobile elbow joint (A) and on X-ray a posterolateral dislocation was revealed (B).

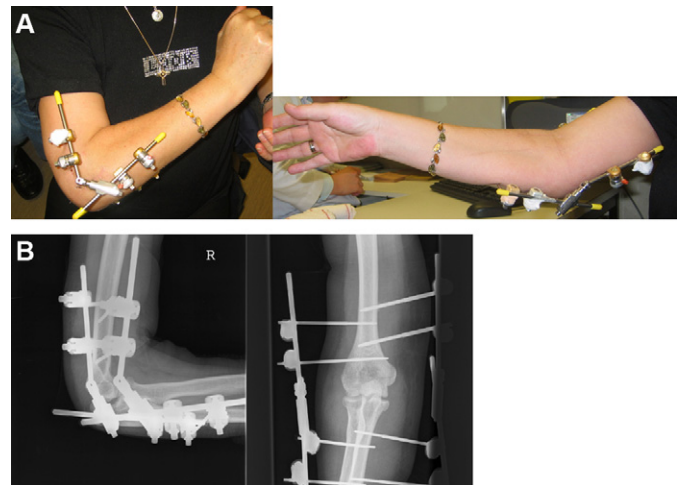


Fig. 2. An articulated external distracting fixator (Stryker[®], Geneva, Switzerland) made an early stable mobilisation possible as seen in these clinical images (A) and X-ray images (B).



Fig. 3. Six months postoperatively, the patient was satisfied with a stable and mobile elbow joint (A) and a normal articulation on X-ray (B).

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