

Nonunion of radial neck fracture

An unusual differential diagnosis of tennis elbow, a case report

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Case report

A 67-year-old woman was referred because of persistent pain in her dominant right elbow. She had been treated for lateral epicondylitis and nonspecific wrist pain by intraarticular corticosteroid injection in the wrist and by physiotherapy for 2 years. The pain occurred during straining and with pro- and supination movements and had started after a fall on the right hand. Radiographs of the wrist were normal. There was full flexion and extension in the elbow joint and normal pro- and supination. There was tenderness on palpation of the lateral epicondyle. Resisted extension of the wrist was slightly painful, but grip strength was normal. Radiographs of the elbow showed an atrophic pseudarthrosis of the radial neck (Figure 1).

The patient considered her symptoms not severe enough to opt for operative treatment.

Discussion

In children, a nonunion of a fracture of the radial neck may develop after open reduction of a severely displaced radial neck fracture or in case of complete reversal of the head of the radius (Morrey 1985). In adults, nonunion is extremely rare; only 3 cases have been reported. Middleton and MacMiles (1976) described a patient with a bilateral pseudarthrosis of the radial neck. They treated this case successfully by bone grafting. Karpinski (1985) reported 1 case with a nonunion which was left untreated because the patient

had no symptoms. The patient described by Horne and Sim (1985) sustained a posterior dislocation of the elbow, with concomitant comminuted fracture of the radial head. She was treated by closed reduction and immobilization for 6 weeks. A pseudarthrosis of the radial neck developed, which was left untreated because pro- and supination took place in the nonunion. We believe that in cases of therapy-resistant epicondylitis, even with an insignificant trauma, radiographic examination should be performed.

References

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- Middleton R W D, MacMiles N. A report of a case of nonunion following fracture of the head of the radius. *Injury* 1976; 8 (1): 31-4.
- Morrey B F. *The elbow and its disorders*. 1st ed. W.B. Saunders Company, Philadelphia 1985.



Figure 1. Atrophic nonunion of a radial neck fracture.

