CASE REPORT

Spontaneous rupture of the triceps in the presence of a patella cubiti

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SUMMARY

Spontaneous rupture of the triceps tendon is a rare injury, 24 cases having been previously reported in the Literature. Patella cubiti is the rare anomaly of a sesamoid bone in the triceps tendon. We report a combination of the two conditions.

CASE REPORT

A 47-year-old amateur body builder felt a sudden tear at his left (non-dominant) elbow while doing vigorous triceps extension exercises with a barbell weighing 140 lbs. He experienced immediate pain and an inability to extend his forearm against gravity. At presentation at this Department he was found to have marked swelling and ecchymosis in the distal third of the extensor aspect of the arm and the diagnosis of ruptured triceps tendon was made. Radiographs revealed a normal left elbow and olecranon with the added presence of a patella cubiti (Figs. 1 and 2). The right elbow showed no radiological or clinical abnormality.

He was treated conservatively by rest and commenced on non-steroidal anti-inflammatory medication orally. By 12 days after injury, swelling and bruising had resolved and there was a palpable gap proximal to the olecranon. Mobilization and physiotherapy were instituted and by 25 days post-injury forearm extension had begun to improve. He was able to return to light weight-training 4 months after injury and by 10 months was able to achieve a 140 pound triceps stretch again. At 3 year review he had maintained this improvement but felt that power was about two thirds of that in the other arm and had subjective tenderness over the palpable patella cubiti with a pulling sensation on forearm extension against resistance. We were unable to carry out

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Figure 1

measured testing of his triceps power, but on testing his elbow against resistance, power was two-thirds that in the right arm. He was offered operative repair of the tendon, but declined.

DISCUSSION

Rupture or avulsion of the triceps tendon is a rare injury, first reported by Partridge (1868). Review of the Literature accounted for 13 more cases by 1972 (Tarsney), since

Figure 2

(Tarsney), since when another 10 have been reported. Patella cubiti is the anomaly of a sesamoid bone in the triceps tendon which is similarly rare. It may cause limitations of extension of the elbow, be asymptomatic or be revealed by radiographs after trauma. Since the first review of four cases (Habbe, 1942), a further four have been recorded (Kattan and Babcock, 1979).

We believe this to be the first report of spontaneous triceps rupture in the presence of patella cubiti. Radiologically, as in this case, a recent fracture of the olecranon process may be differentiated from patella cubiti by lack of cortication of the edges of the fracture. In the young patient confusion can arise because the sesamoid bone may resemble an un-united epiphysis.

Rupture of a tendon is a recognized complication of rheumatoid arthritis, systemic lupus erythematosus, xanthoma, haemangioendothelioma, where injection of corticosteroid has weakened the tendon and with renal failure and secondary hyperparathyroidism. Sherman (1984) has stated that the initiating factor in the rupture of diseased and normal tendons is the sudden application of force to the muscle unit, separation occurring at tendon insertion, muscle belly or musculotendinous junction. In this case it seems likely that the presence of the sesamoid has caused a weakness in the tendon unit as the rupture took place just distal to the patella cubiti, with subsequent migration of the bone proximally, demonstrated radiographically and by clinical examination. Both early and delayed operative repair have been recommended for treatment of triceps tendon rupture but, as in Partridge's original report, an acceptable result has been achieved by conservative treatment in this case.

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