

Bilateral patellar tendon disruption — a professional predisposition?

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SUMMARY

A healthy 37-year-old male carpet fitter sustained an injury to both knees while playing football. The clinical signs of patellar tendon disruption were not obvious because of gross skin thickening as a result of his profession, however, the diagnosis was confirmed by ultrasound scan.

Key words: carpet fitter, recurrent trauma, tendon disruption

CASE REPORT

A 37-year-old man ran into a low wall whilst playing football, striking the anterior aspect of both knees. Following this, he was unable to stand and was carried from the field.

On examination there was swelling of the infra-patellar region of both knees. He had no active extension but full passive extension, flexion was limited to 20°. Passive movements of the patella were painful and it was noted that they were lying higher than usual but were symmetrical. No gap could be felt in the patellar tendons as the skin overlying this region was grossly thickened as a result of constant kneeling, required in profession as a carpet fitter.

Radiographs of both knees showed high lying patellae and a small avulsion fracture from the tip of the lower pole of the left patella. Ultrasound scan confirmed that both patellar tendons had been disrupted.

On exploration the right patellar tendon was torn and the left patellar tendon had avulsed the tip of the patella. There was associated rupture of the

retinacular fibres and bilateral symmetrical indentations on the lateral femoral condyles corresponding to the site of impact of the patellae. The patellar tendons were repaired with polydioxanone (PDS) reinforced with figure-of-eight stainless steel loops.

DISCUSSION

Simultaneous bilateral patellar tendon rupture in a healthy individual is rare,^{1,2} but has been reported in association with connective tissue disorders such as systemic lupus erythematosus and rheumatoid arthritis, and in patients with diabetes mellitus and chronic renal failure.³ The usual mechanism of injury is said to be a sudden flexion of the knee coinciding with quadriceps contraction² but associated patellar compression against the femoral condyles, causing indentation of the femoral articular surface, has not previously been reported.

Repeated minor trauma leading to degenerative changes has been implicated as a cause of tendon rupture⁴ and such a mechanism because of repetitive kneeling may have been implicated in this case.

In summary, the patient was in good health and his profession may have predisposed to a bilateral patellar tendon injury whilst also compromising the ease of diagnosis, which had to be confirmed on ultrasound scan.

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