Bilateral concurrent rupture of the Achilles tendon in the absence of risk factors

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INTRODUCTION

The Achilles tendon withstands forces up to 12 times body weight in running and accounts for 20% of all large tendon ruptures. The incidence is increasing. Most ruptures are activity-related, occurring in men aged 20–50 years (Jozsa et al, 1989; Kader et al, 2002). Less commonly, the predisposing factors are medical treatments or systemic conditions.

Bilateral Achilles tendon rupture is rare but a predisposing factor is almost invariably identifiable. This article reports a case of bilateral Achilles tendon rupture in the absence of risk factors, and outlines the tendinopathies and risk factors associated with Achilles tendon rupture that also serves as a useful starting point when considering any tendon problem.

DISCUSSION

Bilateral concurrent rupture of the Achilles tendon accounts for about 1% of all Achilles tendon ruptures (Habusta, 1995). There are numerous case reports and virtually all identify underlying risk factors, usually sport against a background of symptomatic tendinopathy.

Although not always symptomatic, chronic tendinosis probably represents the final common pathology (Kader et al, 2002). The pathogenesis has not been fully explained but it is likely to represent an imbalance between injury and repair. Histologically, the degeneration can be mucoid, fibrinoid, hyaline, fatty, calcific or any combination of these. Hypercellular areas of vascular infiltration are seen with other hypoxic areas of acellular collagen debris. Eccentric forces result that further exacerbate the process. Rupture occurs either with an unusually large force or a physiological force through a weakened tendon.

Corticosteroid use has been found in 90% of patients with bilateral simultaneous rupture (Orava et al, 1996). Steroids alter the collagen structure of tendons by interfering with cross-linkage and disrupt normal healing. Local corticosteroid injection has also been cited as a risk factor but investigation with animal models found no association (McWhorter et al, 1991).

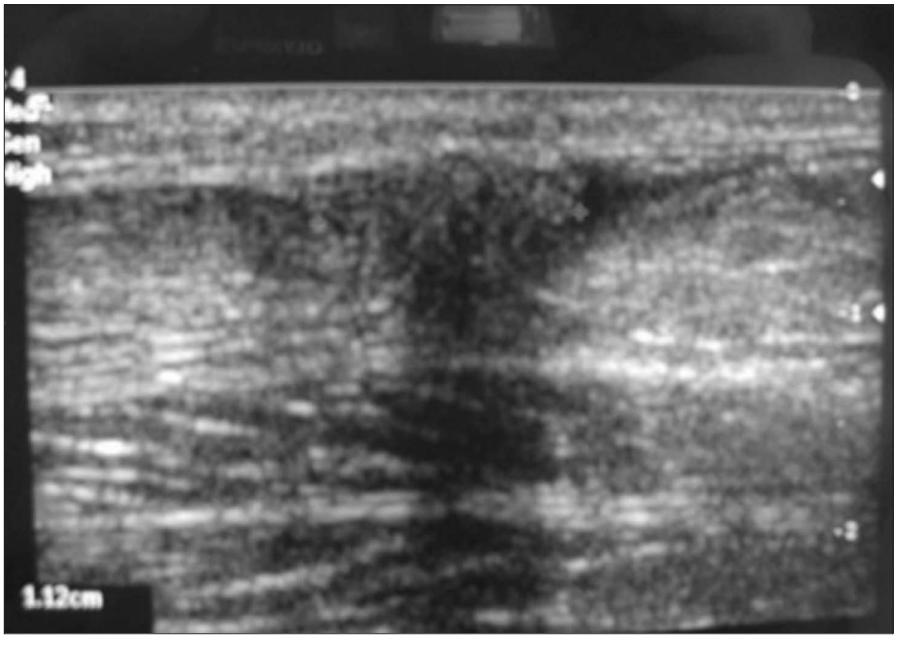
Fluoroquinolones can cause tendinopathy, again by an unknown mechanism. They present with a symptomatic acute tendinosis that usually responds to cessation of therapy. Some, however, develop chronic problems and rupture, both unilaterally and bilaterally. An analysis of 50

CASE REPORT

A 36-year-old woman presented with right calf pain that had begun when she rose suddenly in celebration of a dramatic sporting victory on television. She had felt a snap and was unable to weight-bear. On examination a ruptured Achilles tendon was diagnosed. She subsequently complained of pain in the left calf and, on examination, was also found to have ruptured that Achilles tendon. There was no history of recent or chronic tendon problems, steroid use, fluoroquinolone antibiotic therapy or renal impairment.

Ultrasound (*Figure 1*) confirmed bilateral ruptures, just below the myotendinous junctions, 10 cm from the calcaneal insertion on the right and 7 cm on the left. She was treated with serial casting for 10 weeks, after which she made a complete recovery with physiotherapy.

Figure 1. Ultrasound scan showing rupture of the left tendo Achilles.



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cases with fluoroquinolone-related tendinopathy (van der Linden et al, 2001) found that 24% had experienced a tendon rupture, most frequently the Achilles tendon.

Rare causes include rheumatoid arthritis, systemic lupus erythematosis, polymyalgia rheumatica, renal failure and hyperlipidaemia. Body mass index has not been linked.

CONCLUSIONS

This article presents a case of bilateral Achilles tendon rupture where no predisposing risk factors were identified. Tendon rupture occurs most commonly against a background of chronic tendinosis that may be asymptomatic, in older, recreational athletes. However, other risk factors (steroids, fluoroquinolones, inflammatory conditions and renal problems) must always be considered. HM

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Kader D, Saxena A, Movin T, Maffulli N (2002) Achilles tendinopathy: some aspects of basic science and clinical management. *Br J Sports Med* **36:** 239–49

McWhorter JW, Francis RS, Heckmann RA (1991) Influence of local steroid injections on traumatized tendon properties. A biomechanical and histological study. *Am J Sports Med* **19:** 435–9

Orava S, Hurme M, Leppilahti J (1996) Bilateral Achilles tendon rupture: a report on two cases. *Scand J Med Sci Sports* **6:** 309–12

van der Linden PD, van Puijenbroek EP, Feenstra J, Veld BA, Sturkenboom MC, Herings RM, Leufkens HG, Stricker BH (2001) Tendon disorders attributed to fluoroquinolones: a study on 42 spontaneous reports in the period 1988 to 1998. *Arthritis Rheum* **45:** 235–9

IN THE PUBLIC'S VIEW...

Two years on and what have we got?

Two years ago, the BBC spent a day looking at the NHS and gathering opinion on what people most wanted improved about the service. *NHS Day: for better or worse* (BBC1, 24 March) was supposed to ask whether the money which had been given to the NHS since then had been worth it, and whether the top five 'people's priorities' had been achieved.

It was dire. Nicky Campbell fronted it. He took every opportunity to sneer at Secretary of State for Health John Reid, and to challenge him with unanswerable taunts. Dr Reid was sat on an isolated chair in front of a largely hostile, but mainly silent, audience. The audience was mainly silent because most of them had no chance of saying anything.

I spotted Niall Dickson. Until recently Social Affairs Editor for the BBC, he left to become Chief Executive of the King's Fund. He was there probably because the King's Fund provided the BBC with evidence about the five priorities. I don't want to put words in his mouth, but I imagine he would rather have spent his time somewhere else.

Dr Reid did extremely well under trying circumstances; I have never felt so sorry for a politician. Repeatedly, in various ways, he stressed that the NHS was better than 2 years ago, the comparison that was supposedly the point of the programme, but that we simply couldn't have everything. This was met by howls of 'rationing'.

The programme covered far too much far too thinly, throwing in disgruntled individuals' experiences with the NHS to add human interest. Nicky Campbell introduced each of these with relish, as if he were making unassailable criticisms. To anyone who understands the real problems of the NHS he just looked foolish.

A woman complained that her mother was doubly incontinent, and unable to perform the simplest tasks of everyday living. 'I had to sell her house to pay for her care!' was the challenge. This point was somewhat dwelled on because the number one priority 2 years ago (from a public that doesn't want to pay taxes, and with a media that speaks of tax 'burdens') was free long-term care for the elderly. Well if that was the priority, why didn't the BBC make a good programme about it, which asked some serious questions?

They might have asked the woman why her mother's house should not be sold: she was plainly incapable of living in it any more. What else would happen to her money? Fiona Bruce co-hosted, and should have been challenged as she wittered on about stopping people falling ill in the first place. Do what you like – we will all nonetheless die, and before we die we are likely to become ill.

But, without tapping on a palmtop, to every challenge John Reid produced precise numbers: 12 000 new whole-equivalents, 6700 new nurses, 47 new accident and emergency consultants, £12.6 million, 27% fewer premature deaths from cancer – these are not quotes but you get my drift. How do politicians remember so many facts and figures? The Liberal Democrat spokesman on the programme spoke of cutting red tape, but couldn't challenge Dr Reid: you only have the numbers when you're in office. HM

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