

Appendix 1: Making the diagnosis of Achilles tendinopathy

The diagnosis of Achilles tendinopathy is often made on the basis of history and physical examination.¹ Classic symptoms include pain in the Achilles tendon that varies in intensity but is generally worsened by exercise. Some patients report stiffness in the morning or stiffness that decreases with repeated movement or exercise; this sensation of stiffness may relate to the accumulation of proteoglycan degradation products within the tendon matrix.² Initially or in milder instances, pain may slightly improve during the course of exercise but then worsen in the hours or days following the provoking activity, possibly because of the irritation of the abnormally proliferative neurovascular tissue that characterizes chronic tendinopathy lesions. In more severe or longstanding instances, pain may be provoked simply by walking, with dramatic reductions in activity level as a result.

There may be a palpable thickening in the midportion of the tendon (i.e., 2–6 cm from its insertion).³ Strength and endurance are typically decreased on the affected side and can be assessed by counting the number of toe raises a patient can perform. The arc sign (a palpable tendon nodule that moves during plantar- and dorsiflexion of the foot) and the Royal London Hospital test (reduction of pain on palpation when the foot is dorsiflexed) are specific and reliable in diagnosing tendinopathy, but are not always present.³ In instances of paratendonitis, crepitus may be felt during plantar- or dorsiflexion.

Colour duplex ultrasonography or magnetic resonance imaging can be helpful in identifying the type of Achilles tendon disorder, such as problems arising at the insertion of the tendon. These problems do not respond as favourably to conservative treatment and can also involve abnormalities of the tendon–bone interface, calcaneus or related bursae.

In addition to insertional disorders, other differential diagnoses include partial or complete rupture of the tendon, plantaris tendinopathy, posterior ankle impingement, irritation of the sural nerve, os trigonum syndrome, ossification of the Achilles tendon and tendon xanthoma.^{1,4} Partial rupture is particularly important to distinguish from tendinopathy, because the standard conservative treatment that emphasizes exercise may irritate and exacerbate this condition.

Patients presenting with pain in the Achilles tendon should undergo a biomechanical examination, because even relatively mild deviations in the kinetics of the lower extremities have shown significant associations with the presence of Achilles tendinopathy. These include tight musculature of the calves, increased inversion of the hindfoot and reduced strength on plantarflexion.^{5,6}

It may be prudent to examine blood lipid values in patients who have not already had this done, given the potential association between Achilles tendinopathy and hypercholesterolemia.⁷ The clinician should also inquire about any history of diabetes.⁸ A valid scale such as the Victorian Institute of Sports Assessment–Achilles (VISA-A)

questionnaire may be used to record the baseline levels of pain and function, and to assess the impact of the condition on the patient's activities.⁹

References

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