

THE TREATMENT OF THE ACHILLES'S TENDON INJURIES*Maffulli N**Professor of Trauma and Orthopaedic Surgery, Keele University, UK*

Overuse injuries affecting the Achilles tendon are common. The Achilles tendon may respond to repetitive overload beyond physiological threshold by either inflammation of its sheath, degeneration of its body, or a combination of both. The aetiology of Achilles tendinopathy remains unclear, but is probably multifactorial resulting from a combination of intrinsic and extrinsic factors. Achilles tendinopathy typically presents with pain 2 to 6 cm proximal to the tendon insertion after exercise. As the pathological process progresses, pain may occur during exercise, and, in severe cases, it may interfere with activities of daily living. Ultrasound and Magnetic Resonance Imaging (MRI) are the current imaging modalities of choice in patients with Achilles tendinopathy, but both have a high incidence of false positive findings.

Tendinopathy can probably be prevented by encouraging athletes and their coaches to follow a sensible training program. Management of tendinopathy is more an art than a science. The efficacy of a conservative rehabilitation program is debatable. Favourable long-term prognosis has been reported with comprehensive conservative protocol including relative rest, analgesia, physiotherapy and orthoses.

Reducing training intensity and duration or a reduction in other aggravating activities may be beneficial but tendon loading stimulates the repair and remodelling of collagen fibres. Physiotherapy techniques may include cryotherapy, deep friction massage, Augmented Soft Tissue Mobilization (ASTM), gentle stretching and eccentric strengthening exercises. Several drugs, such as low dose heparin, wydase and aprotinin, have been used in the management of peri- and intra-tendinous pathology. Although widely used and promising, evidence of their long-term effectiveness is still unclear.

Peritendinous injections with corticosteroids are still controversial, as there has not been any good prospective randomised controlled trials. Surgery is generally recommended after exhausting conservative management, usually after at least three to six months. Long-standing Achilles tendinopathy is associated with poor post-operative results, with a greater rate of re-operation before reaching an acceptable outcome.

In general, surgical procedures can be broadly grouped in four categories, namely open tenotomy with removal of abnormal tissue (paratenon not stripped), open tenotomy with removal of abnormal tissue (paratenon stripped), open tenotomy with longitudinal tenotomy with or without paratenon stripping, and percutaneous longitudinal tenotomy.

The objective of surgery is to excise fibrotic adhesions, remove degenerated nodules and make multiple longitudinal incisions in the tendon to detect intratendinous lesions and to restore vascularity and possibly stimulate the remaining viable cells to initiate cell matrix response and healing.

Recently, endoscopic debridement of the Achilles tendon has been described, using a two portal technique. This has the advantage of reducing the risk of wound healing problems or painful scars in a region of poor vascularity. Overall the long term outcome for patients with Achilles tendinopathy would appear to be good. However, few studies report their method of assessment which makes it difficult to compare the results.
