DRY-NEEDLING AND HIGH-VOLUME INJECTION THERAPY FOR ACHILLES TENDINOPATHY

Devendra Mahadevan, Raj Bhatt, Maneesh Bhatia

University Hospitals of Leicester
United Kingdom
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Dry-needling and high-volume injection therapy for Achilles tendinopathy

Devendra Mahadevan

My disclosure is in the Final AOFAS Program Book. I have no potential conflicts with this presentation.
Chronic Achilles tendinopathy is an overuse injury that is common in athletes, but is also seen in the non-athletic population.

The treatment is challenging with a lack of scientific evidence to define its optimal management.

Novel techniques have been used with the aim of promoting healing.

- **Dry needling** - Performing repeated lancing of abnormal areas of tendon in order to incite internal haemorrhage. The consequent inflammatory response may induce the formation of granulation tissue which strengthens the tendon.

- **High-volume injections** - Tendon neovascularisation is seen as a prominent feature on Doppler ultrasound. Obliteration of the neovasculature through high-volume injections may reduce refractory Achilles tendon pain.
STUDY OBJECTIVE

To evaluate the efficacy of the combination treatment of dry-needling and high-volume injection in managing refractory mid-substance Achilles tendinopathy.
MATERIALS & METHODS

- Prospective review of 20 tendons (18 patients) followed-up for at least 6 months after treatment. Mean age 48 yr (27 to 61); 13 Female: 5 Male patients

Inclusion criteria
- More than 6 months of symptoms (pain)
- Ultrasound confirmed mid-substance Achilles tendinopathy
- Failed formal conservative treatment (structured physiotherapy and eccentric stretching exercises)

Exclusion criteria
- Insertional Achilles tendinopathy
- Previous injections or surgery to tendon
- Peripheral neuropathy
- Anticoagulant treatment
- Signs of localised infection
TREATMENT TECHNIQUE

Dry-needling was performed under ultrasound guidance with multiple longitudinal passes over the ‘degenerate’ area of the tendon.

The needle was then advanced between the anterior aspect of the Achilles tendon and Kager’s fat pad and a mixture of lignocaine (1%) and normal saline (30 ml) was injected.
FOLLOW-UP SCHEDULE

- No formal physiotherapy after treatment
- Patients were followed-up until resolution of symptoms
- Outcome measures:
  - Patient satisfaction with treatment
  - VISA-A scores
RESULTS

Patients’ satisfaction with outcome of treatment

Dissatisfied (seeking further intervention) 40%

Satisfied (not seeking further intervention) 60%
Pre-treatment VISA-A scores in the failed treatment group were significantly lower vs. Pre-treatment scores in the therapeutic group (p<0.05)
CONCLUSIONS

- Early results suggest that this technique is efficacious in over half of the studied population.
- It is more likely to be successful in patients who present with moderate VISA-A scores.
- Ongoing recruitment and review of these patients will increase the power of this study.