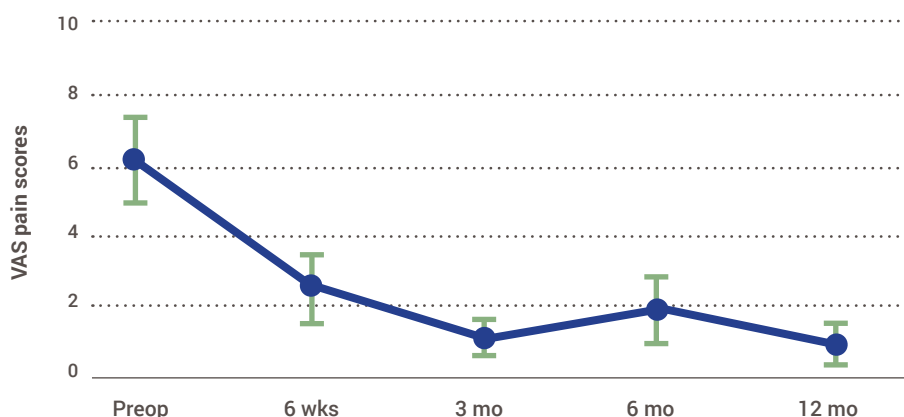


All Patients Had Significant Pain Reduction by **6 Weeks** TX System is as Effective As Open Surgical Intervention

A Prospective Mayo Clinic Study on Medial and Lateral Epicondylitis Published in the JSES (Barnes et al., 2015)



Study Methods

- A case series; prospective study.
- 19 patients with > 6 months of failed non-operative therapy for medial (n=7) or lateral (n=12) elbow tendinopathy were treated with percutaneous ultrasonic tenotomy using the Tenex Health TX® System.
- Patient outcomes were assessed via patient satisfaction, VAS pain scores, Quick DASH scores and MEPS score at 6 weeks, 3 months, 6 months and 12 months.

Results and Conclusions

- Mean VAS score significantly improved (from 6.4 to 2.6 at 6 wks and 0.7 at 12 mons). Mean Quick DASH significantly improved (from 44.1 to 8.6 at 12 mons).
- Mean MEPS significantly improved (from 59.1 to 83.4 at 12 mons).
- At end of 12-month follow-up period, 15/19 patients (79%) had >75% reduction in VAS scores.
- Complications = 0.
- Procedure time < 15 mins.
Mean energy time: 39 secs.
- Percutaneous ultrasonic tenotomy appears to be a safe and effective treatment for chronic refractory lateral or medial elbow tendinopathy.

Key Takeaways

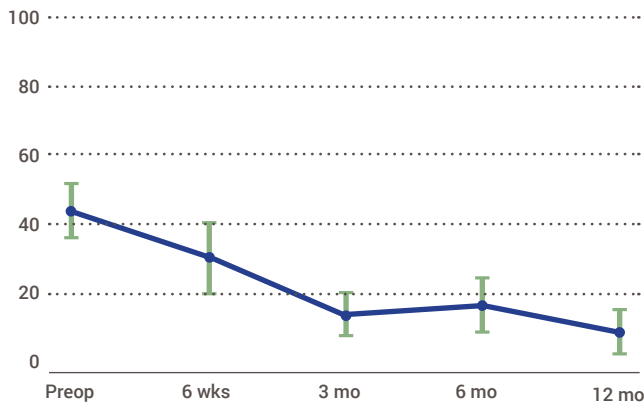
- **Fast recovery:** all patients had significant pain reduction by 6 weeks.
- Treats medial and lateral elbow tendinopathy.
- **No further treatment required.**
- **No recurrence.**
- **No complications.**

Percutaneous Ultrasonic Tenotomy for Chronic Elbow Tendinosis: A Prospective Study

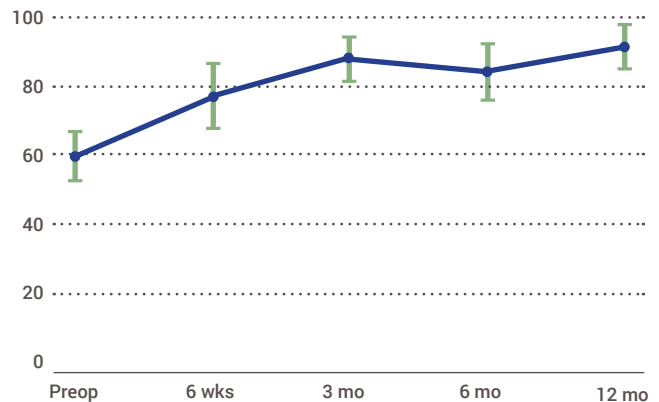
Barnes DE, Beckley JM, Smith J.
Journal of Shoulder and Elbow Surgery. 2015;24(1):67-73.

Clinical “lateral epicondylitis” or “tennis elbow” is the most common cause of elbow pain, affecting 2-3% of the population and resulting in significant activity restriction and economic burden. Although historically considered to be an inflammatory condition of the common extensor tendon, it is now well established that chronic symptoms are typically associated with tendon degeneration resulting from repetitive microtrauma. Although most patients respond to conservative medical treatment, the balance are refractory and considered candidates for surgical intervention with the goal of cutting and removing the “tendonotic” tissue and stimulating a healing response. The objective of this study was to test the hypothesis that ultrasound guided percutaneous tenotomy using the Tenex Health TX System would

produce comparable outcomes to open surgical intervention at one year. Nineteen consecutive patients ages 38-67 years failing conservative management for > 6 months with either medial (7) or lateral (12) tendinopathy were prospectively studied. Patient assessment included: visual analog pain scale (VAS), the Disabilities of the Arm, Shoulder and Hand index (DASH), and the Mayo Elbow Performance Score (MEPS) by an independent observer pre-treatment and 6 weeks, 3 months, 6 months and 12 months post-procedure. Results revealed no procedural complications and a significant improvement in pain VAS scores from 6.4 pre-treatment to 2.6 at 6 weeks and sustained at 12 months post-procedure ($p < 0.0001$), pre-treatment DASH of 44.1 to 8.6 at 12 months ($p < 0.0001$), and MEPS pre-treatment score of 59.1 while at 12 months 83.4 ($p < 0.0001$). By localizing, tenotomizing and removing diseased tissue, ultrasonic percutaneous tenotomy appears to be a safe and definitive, treatment option for chronic, refractory lateral or medial elbow tendinopathy.



Disabilities of Arm, Shoulder and Hand Scores (Q-DASH)



Mayo Elbow Performance Scores (MEPS)

