

# Radiofrequency microtenotomy (RFM) with TOPAZ<sup>®</sup> Microdebrider or physical therapy (PT) for Achilles tendinopathy: results of a randomised clinical trial

Al-Ani Z, Meknas D, Kartus J-T, Lyngedal Ø, Meknas K. *Orthop J Sports Med.* 2021;9(12):2325967121110625.

Available at: [SAGE Journals](#) 

## Key points

Compared with PT, patients receiving RFM using a TOPAZ Microdebrider demonstrated:



**Significantly higher Foot and Ankle Outcome Scores (FAOS) at 2 years ( $p < 0.01$ )**



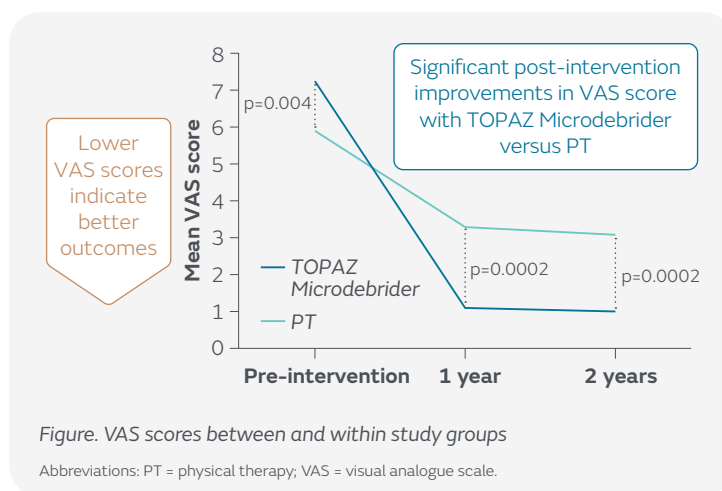
**Lower pain, indicated by significantly lower visual analogue scale (VAS) scores at 1 and 2 years ( $p < 0.01$ )**

## Overview

- Single-centre randomised controlled trial comparing PT with bipolar RFM using a TOPAZ Microdebrider, for the treatment of midportion Achilles tendinopathy
- Patients with pain in the Achilles tendon lasting  $\geq 6$  months, impairment of daily and sports activities and evidence of tendinosis in the tendon midportion on MRI were recruited between June 2016 and May 2018
- Of 47 patients randomised to RFM using a TOPAZ Microdebrider ( $n=24$ ) or PT ( $n=23$ ), 38 completed a 2-year follow-up ( $n=20$  and  $n=18$ , respectively)
- Clinical outcomes assessed pre-intervention and at 1 and 2 years included:
  - VAS score (pain)
  - FAOS (pain, function, quality of life, and other symptoms)
  - Tendinosis, oedema and rupture via MRI ( $n=17$  in each group)

## Results

- Use of a TOPAZ Microdebrider resulted in significantly lower VAS scores at 1 and 2 years post-intervention compared with PT ( $p=0.0002$ ; Figure)
- At 2 years, a significant difference in favour of the TOPAZ Microdebrider group versus PT was observed for all FAOS subscales ( $p < 0.01$ ), excluding "sport"
  - Significantly higher (better) FAOS scores were observed in the TOPAZ Microdebrider group for all variables at 1 and 2 years versus pre-intervention ( $p < 0.05$ ), but only for "symptoms" at 2 years in the PT group
- Significant improvements in tendinosis and oedema, compared with pre-intervention, were reported for the TOPAZ Microdebrider group at 2 years ( $p < 0.05$ ), but not the PT group
  - No significant difference between the TOPAZ Microdebrider and PT groups was found ( $p > 0.05$ )



## Conclusions

Compared with PT, RFM using a TOPAZ Microdebrider led to significantly better improvements in VAS score and FAOS at 2 year follow-up.

## Considerations

The study's main limitations include the relatively small sample size and its potential to be underpowered. Additionally, VAS scores and MRI findings were significantly different between groups pre-intervention, which may have introduced bias.