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An improved ultrasound-guided injection technique for treatment of plantar fasciitis

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Dear Editor,

We read with great interest the recently published article by Gurun et al, which presents valuable insights into the sonographic assessment of plantar fasciitis (PF) [1]. While we appreciate the authors for their great contributions to the treatment of PF and the use of ultrasonography, we would like to underscore our concerns about the injection technique described in the methodology section.

Plantar fasciitis (PF) is the most common cause of heel pain and characterized by inflammation of the plantar fascia. Typical symptoms include plantar heel pain during weight-bearing activities, especially with the first steps in the morning. Prior studies have shown that the deep fibers of the plantar fascia are predominantly involved in the pathogenesis of PF, often accompanied by plantar calcaneal enthesophyte formation, particularly in chronic cases [2].

On the other hand, superficial injections, administered between the plantar fascia and the overlying heel fat pad using the direct in-plane technique, are commonly reported due to being technically easier. However, this method carries a risk of heel fat pad atrophy and may not effectively target the deeper pathology of PF.

In contrast, deeper corticosteroid injections appear to be more appropriate and relevant, both anatomically and therapeutically. One study demonstrated significantly better improvements in both functional and pain scores, as well as a greater reduction in plantar fascia thickness, in patients who received deep injections compared to those who received superficial ones [3].

In this context, we recommend the EURO-MUSCULUS/USPRM technique, which involves the use of a 25–27 gauge, 1.5 to 2-inch needle, applied via an in-plane, medial-to-lateral approach.

This method targets the deep compartment of plantar fascia adjacent to the proximal flexor digitorum brevis tendon lies (Fig. 1) [4].

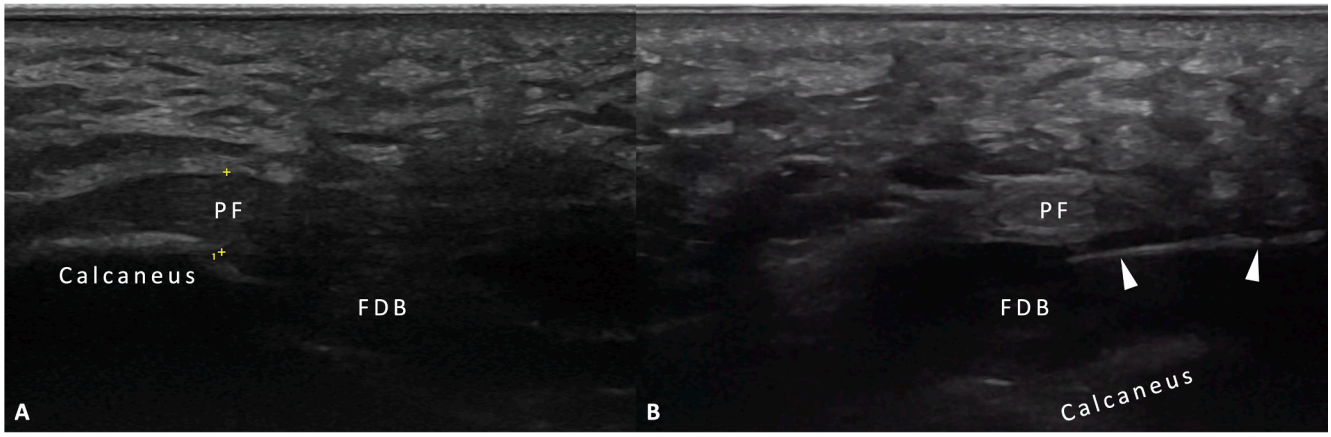

Fig. 1. Longitudinal sonographic image demonstrating a thickened plantar fascia between yellow crosses (A). The needle *(arrowhead)* is positioned between the calcaneus and the plantar fascia using the in-plane technique (B). PF: plantar fascia, FDB: flexor digitorum brevis muscle. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

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In conclusion, we believe that a more appropriate and effective injection technique is feasible and should be considered. Once again, we thank the authors for their valuable contribution to the growing body of literature on musculoskeletal ultrasonography.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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