

Comparative Efficacy of Scalene versus Scapular Approach for Ultrasound-Guided Corticosteroid Hydrodissection in Dorsal Scapular Nerve Entrapment: A Randomized Controlled Trial [Response to Letter]

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Dear editor

We thank Dr. Himanshu Gakhar for his thoughtful and constructive comments on our article entitled “Comparative efficacy of scalene versus scapular approach for ultrasound-guided corticosteroid hydrodissection in dorsal scapular nerve entrapment: a randomized controlled trial”.¹ We are grateful for his careful reading of our work and for highlighting the important anatomical and mechanistic implications of our findings.

Dr. Gakhar correctly notes that the dorsal scapular nerve (DSN) is particularly susceptible to entrapment along its course through the middle scalene muscle.²⁻⁴ Our study was designed precisely to test whether intervention at this presumed proximal site of compression would yield superior outcomes compared with a more distal scapular approach.⁵ The observed superiority of the scalene approach in pain reduction, fatigue improvement, and patient satisfaction strongly supports this pathology-driven rationale. We agree with Dr. Gakhar that these findings shift the paradigm away from convenience-based injection strategies toward anatomically informed, individualized treatment planning. In this regard, sonographic nerve tracking is indeed invaluable for improving procedural precision.⁶

We also appreciate Dr. Gakhar’s discussion of the discrepancy between clinical improvement and the relatively limited change in motor distal latency. We concur that symptomatic recovery may precede electrophysiological normalization in entrapment neuropathies. This is precisely why we prioritized patient-centered clinical outcomes—pain intensity, fatigue, and satisfaction—as our primary and key secondary endpoints.

Dr. Gakhar’s emphasis on fatigue as an outcome is particularly welcome. Fatigue is often underrecognized in chronic pain syndromes despite its substantial impact on function and quality of life. The progressive improvement observed in the scalene group may reflect not only reduced nociceptive burden but also improved muscular performance and daily activity tolerance. We agree that this aspect deserves dedicated investigation in future trials.

We are likewise grateful for Dr. Gakhar’s balanced acknowledgment of our study’s limitations, including the relatively short follow-up period, the absence of a sham-control arm, and the inability to distinguish the specific contribution of



mechanical hydrodissection from that of corticosteroid administration. Operator dependence remains an inherent challenge in ultrasound-guided procedures, although we attempted to minimize this through standardized protocols and experienced proceduralists across all seven centers. These limitations were clearly stated in our original manuscript.

We strongly endorse all of the future research directions proposed by Dr. Gakhar. Specifically, we agree that the field would benefit from:

1. Longer-term follow-up (beyond 6–12 months) to assess durability of benefit.
2. Sham-controlled designs to definitively quantify the true treatment effect.
3. Mechanistic studies separating the effects of hydrodissection from pharmacological action.
4. Integration with physiotherapy-based rehabilitation (eg, scapular stabilization and postural correction) to explore potential synergistic effects.

In conclusion, we sincerely thank Dr. Gakhar for his scholarly engagement with our work. His comments reinforce the central clinical message of our trial: that anatomically informed proximal targeting of the DSN offers superior short-term benefit in appropriately selected patients with DSN entrapment. We hope that our study, and this subsequent discussion, will stimulate further high-quality research into this underrecognized but treatable condition.

Disclosure

The authors report no conflicts of interest in this communication.

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