Comments on "Lumbar Medial Branch Cryoneurolysis Improves Pain and Function Versus Radiofrequency Ablation for Chronic Low Back Pain: 12-Month Randomized Pilot Study"

To the Editor:

We read with interest the randomized pilot study by Ferrillo et al., titled "Lumbar Medial Branch Cryoneurolysis Improves Pain and Function Versus Radiofrequency Ablation for Chronic Low Back Pain: 12-Month Randomized Pilot Study," published in *Pain Physician*. The authors are to be commended for addressing an important clinical topic and for providing 12-month follow-up data comparing cryoneurolysis and radiofrequency ablation (RFA) for facet-mediated chronic low back pain (CLBP). However, we would like to raise several technical considerations regarding the procedural descriptions that may influence interpretation of the study's results.

First, in both treatment groups, needle placement is described as being performed "under fluoroscopic guidance, using a 15-degree oblique view and a 15-degree caudad angle onto the superior articular process at the junction with the transverse process." While this description suggests technical standardization, it does not reflect routine clinical practice. Lumbar medial branch targeting requires individualized adjustment of oblique and caudal angulation, as facet joint orientation and medial branch anatomy vary according to spinal level, degenerative changes, lumbar lordosis, scoliosis, and rotational deformity. Consensus guidelines emphasize that fluoroscopic angulation should be dynamically optimized to visualize the superior articular process–transverse process junction rather than relying on fixed angles (1,2).

Second, the description of sensory and motor stimulation in the RFA group appears incomplete. The manuscript notes that stimulation confirmed correct needle placement with "no stimulation of the sensory or motor roots." However, standard medial branch RFA technique requires intentional sensory and motor stimulation prior to lesioning. Sensory stimulation (approximately 50 Hz) should reproduce localized pain or pressure at the target site, confirming medial branch proximity, whereas motor stimulation (approximately 2 Hz) should elicit localized paraspinal muscle contraction (e.g., multifidus twitch) without distal lower-extremity motor response, thereby excluding spinal nerve root involvement (1-3). These steps are essential for procedural accuracy and safety and should be clearly described.

Similar anatomical considerations apply to cryoneurolysis. Although cryoneurolysis may be more forgiving due to ice-ball formation, accurate probe positioning remains critical given known variability in medial branch anatomy (2). Failure to individualize fluoroscopic angulation in either group may affect the consistency of nerve targeting and potentially influence comparative outcomes.

In summary, while the study by Ferrillo et al. (1) provides valuable prospective data on cryoneurolysis for facet-mediated CLBP, clarification of fluoroscopic technique and neurostimulation protocols would strengthen methodological rigor and improve reproducibility. Acknowledging these technical nuances may also help contextualize the observed differences between treatment groups.

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References

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