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Sequential Treatment of Overlapping Facet-Mediated and Vertebrogenic Low Back Pain: Early Response to Basivertebral Nerve Ablation

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BACKGROUND

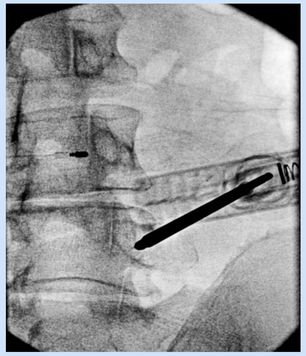
- Chronic low back pain may arise from multiple overlapping pain generators, including facet-mediated and vertebrogenic pain.
- Lumbar medial branch radiofrequency ablation (RFA) targets facet-mediated pain, whereas basivertebral nerve ablation (BVNA) targets vertebral endplate-mediated pain.
- This case highlights sequential treatment of suspected overlapping facet-mediated and vertebrogenic low back pain.

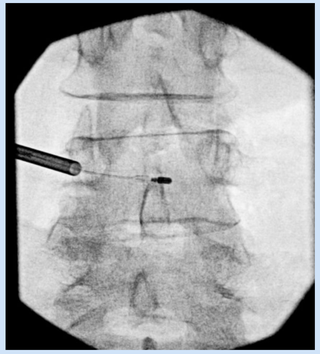
CASE PRESENTATION



- 65-year-old woman with chronic low back pain, prior right L4-L5 hemilaminectomy/discectomy, and diffuse idiopathic skeletal hyperostosis.
- Pain was constant, aching/throbbing, and rated 5-7/10.
- Pain limited walking, sitting, exercise, and ADLs
- Trialed conservative therapies: PT, home exercise, acetaminophen, NSAIDs, and lidocaine patches.
- Physical Exam: Lumbar facet and paraspinal tenderness, negative bilateral straight-leg raise, 5/5 BLE strength, intact sensation, no neurologic red flags

BVNA FLUROSCOPY

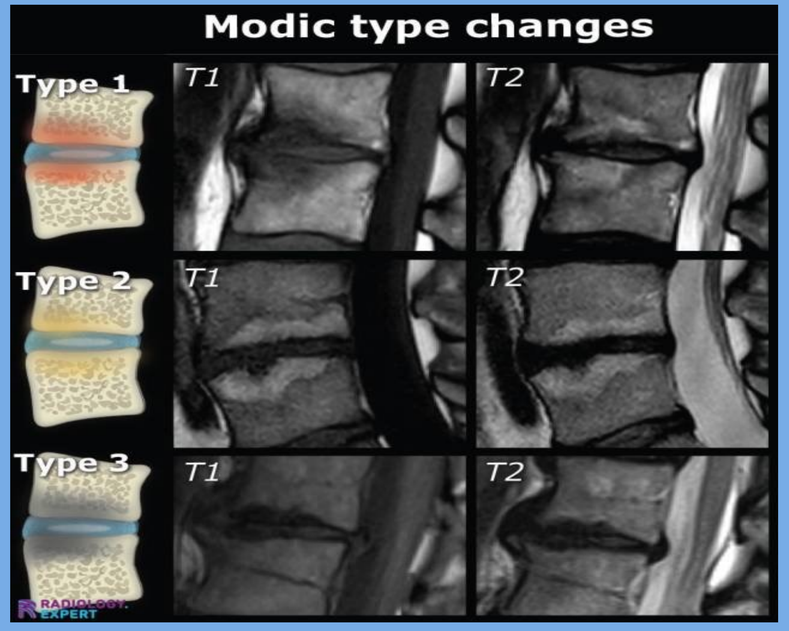




CLINICAL COURSE AND INTERVENTION



MODIC CHANGES



DISCUSSION



- *Axial LBP is often multifactorial:* facet-mediated and vertebrogenic pain may coexist, particularly in degenerative spines.
- *Different targets, complementary tools:* facet RFA targets the medial branches, while BVNA targets the basivertebral nerve. They may be used sequentially when different pain generators are suspected.
- *Treating one pain generator revealed another:* L3-L5 RFA produced 95-100% relief, but pain recurred two months later with flexion- and sitting-provoked axial symptoms. L4-L5 Modic changes supported an additional vertebrogenic component, prompting BVNA.
- *The complete early response aligns with current evidence:* randomized trials show meaningful improvements in pain and disability after BVNA, with benefits sustained on longer-term follow-up.
- *Early success, but durability remains uncertain:* this single case has short follow-up, so the response should be viewed as an early favorable outcome rather than proof of long-term durability.



CONCLUSION

- Facet-mediated and vertebrogenic pain may coexist in chronic axial low back pain.
- Sequential, target-specific treatment with facet RFA followed by BVNA was associated with complete early pain relief and functional improvement.
- This case supports targeted, sequential treatment of complex axial low back pain, with longer follow-up needed to assess durability.

REFERENCES