

General

# Revisiting Therapeutic Facet Joint Injections for Chronic Spinal Pain: A Case Series

Jamal Hasoon<sup>1</sup>, Syed Mahmood<sup>2</sup>, Anvinh Nguyen<sup>3</sup>, Ranganathan Govindaraj<sup>1</sup>, Christopher L Robinson<sup>4</sup>

<sup>1</sup> Department of Anesthesiology, Critical Care, and Pain Medicine, The University of Texas Health Science Center at Houston, <sup>2</sup> Department of Psychiatry and Pain Medicine, University of Pittsburgh Medical Center, <sup>3</sup> Department of Anesthesiology, Baylor College of Medicine, <sup>4</sup> Department of Anesthesiology, Perioperative, and Pain Medicine, Harvard Medical School, Brigham and Women's Hospital

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Facet joint injections with steroids are a common therapeutic intervention for chronic pain management, particularly in patients with lumbar spondylosis and facet arthropathy. However, many insurance companies do not provide coverage for this helpful intervention. This case series presents four patients who experienced significant and sustained pain relief following therapeutic facet joint injections. The aim of this case series is to highlight the efficacy of facet joint injections with steroids in managing chronic spinal pain and to discuss the potential benefits of this treatment modality in patients who may not be interested in pursuing lumbar radiofrequency neurotomy.

### INTRODUCTION

Chronic pain, particularly low back pain, is a prevalent issue affecting millions worldwide. Facet joint pain, resulting from degenerative changes or trauma to the facet joints, is a common source of chronic spinal pain.<sup>1</sup> Facet joint injections with steroids are a minimally invasive treatment option aimed at providing pain relief and improving quality of life.<sup>2</sup> Unfortunately, many insurance companies do not provide coverage for therapeutic facet injections and instead require patients to undergo diagnostic medial branch injections along with radiofrequency neurotomy. Some patients may not be interested in proceeding with neuroablative therapies, or alternatively may not have the time and resources to undergo two rounds of diagnostic injections followed by radiofrequency neurotomy.

This paper presents a case series of four patients who experienced significant and sustained relief following therapeutic facet joint injections with steroids. All four patients declined proceeding with diagnostic medial branch blocks and radiofrequency neurotomy. This case series underscores the clinical value of this therapeutic approach.

### CASE SERIES

#### PATIENT 1

A 78-year-old female with lumbar spondylosis and facet arthropathy with no prior lumbar surgery. The patient had persistent pain over five years. The pain was exacerbated by physical therapy and not relieved with oral analgesics. The patient underwent bilateral L4/L5 and L5/S1 facet injections bilaterally with 80% relief sustained at 3 month follow

up. Therapeutic solution was a mixture of 80mg of triamcinolone and 4mL of 0.25% bupivacaine that was evenly divided among the facet joints.

#### PATIENT 2

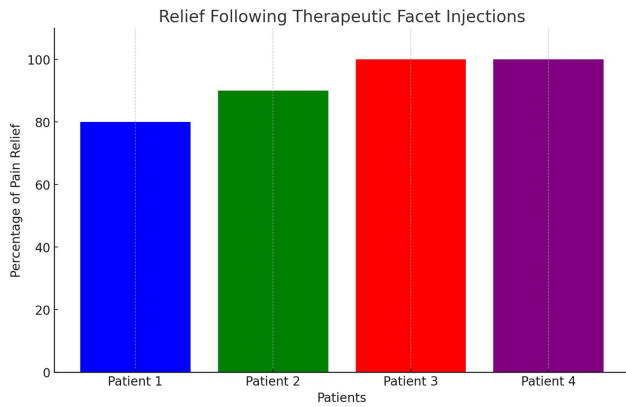
A 78-year-old female with lumbar spondylosis and facet arthropathy with no prior lumbar surgery. The patient had persistent pain over three years. The pain was not improved with physical therapy and there was no benefit with oral analgesics. The patient underwent right sided L3/L4 and L4/L5 facet injections with 90% relief sustained at 3 month follow up. Therapeutic solution was a mixture of 60mg of triamcinolone and 2mL of 0.25% bupivacaine that was evenly divided among the facet joints.

#### PATIENT 3

A 77-year-old female with lumbar spondylosis and facet arthropathy with a prior history of a L5 compression fracture treated with kyphoplasty. The patient had persistent pain over five years. The pain was exacerbated by physical therapy and only moderately improved with opioid pain medications. The patient underwent bilateral L4/5 and L5/S1 facet injections bilaterally with 100% relief sustained at 3 month follow up. Therapeutic solution was a mixture of 80mg of triamcinolone and 4mL of 0.25% bupivacaine that was evenly divided among the facet joints.

#### PATIENT 4

A 66-year-old male with lumbar spondylosis and facet arthropathy with no prior surgery. The patient had persistent pain over one year. The pain did not improve with physical



**Figure 1. Patient reported pain relief sustained at 3 month follow up following therapeutic facet injections**

therapy and only mildly relieved with non-steroidal anti-inflammatory drugs (NSAIDs). The patient underwent a right sided L3/L4 and L4/L5 facet injections with 100% relief sustained at 3 month follow up. Therapeutic solution was a mixture of 40mg of triamcinolone and 2mL of 0.25% bupivacaine that was evenly divided among the facet joints.

The results of this case series are demonstrated in [figure 1](#) below.

## DISCUSSION

Facet joints are the articulations between the posterior spinal column, playing a key role in stabilizing the lumbar spine. These joints receive their nerve supply from the medial branches of the dorsal rami of the spinal nerves.<sup>3</sup> Lumbar facetogenic pain can radiate into the buttocks and upper legs. The pain is typically axial in nature and made worse with maneuvers that stress the joints such as spinal extension and rotation.<sup>1,3</sup> Interventional options to manage this pain include intraarticular facet joint injections, medial branch nerve blocks, and facet joint neurotomy procedures. Intraarticular facet joint injections have both diagnostic and therapeutic value, offering a simple technique to manage facetogenic pain. However, many insurance companies discourage this therapy, preferring patients undergo

diagnostic medial branch injections and radiofrequency neurotomy.

Facet joint injections with steroids are an established treatment for managing chronic pain originating from the facet joints.<sup>4</sup> The cases presented in this series demonstrate significant and sustained pain relief following this intervention. The underlying mechanisms for the efficacy of steroid injections include their potent anti-inflammatory properties, which reduce local inflammation and modulate pain pathways. The use of fluoroscopic guidance ensures accurate needle placement, enhancing the efficacy and safety of the procedure. Incorrect needle placement can lead to suboptimal results and increased risk of complications.<sup>4,5</sup>

While the cases in this series showed sustained relief, it is important to recognize that the duration of pain relief can vary among patients. Factors influencing the duration include the severity of the underlying condition, the exact site of injection, and individual patient responses to steroids. The authors also acknowledge that there is conflicting literature on the use of therapeutic facet injections but believe this is a valuable intervention for select patients who are not interested in proceeding with neuroablative therapies.<sup>6</sup>

## CONCLUSION

The cases presented in this series underscore the efficacy of therapeutic facet joint injections with steroids in providing significant and sustained pain relief for patients with chronic facet joint syndrome. This treatment modality offers a minimally invasive option for managing chronic spinal pain, improving patient outcomes and quality of life. Future studies should focus on long-term outcomes and identifying patient factors that predict sustained relief. Physicians and insurance carriers should strongly reconsider this therapy in patients who do not wish to proceed with neuroablative therapies.

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## REFERENCES

1. Yoo YM, Kim KH. Facet joint disorders: from diagnosis to treatment. *Korean J Pain*. 2024;37(1):3-12. [doi:10.3344/kjp.23228](https://doi.org/10.3344/kjp.23228)
2. Manchikanti L, Knezevic E, Knezevic NN, et al. Effectiveness of Facet Joint Nerve Blocks in Managing Chronic Axial Spinal Pain of Facet Joint Origin: A Systematic Review and Meta-Analysis. *Pain Physician*. 2024;27(2):E169-E206.
3. Du R, Xu G, Bai X, Li Z. Facet Joint Syndrome: Pathophysiology, Diagnosis, and Treatment. *J Pain Res*. 2022;15:3689-3710. [doi:10.2147/JPR.S389602](https://doi.org/10.2147/JPR.S389602)
4. Manchikanti L, Kaye AD, Soin A, et al. Comprehensive Evidence-Based Guidelines for Facet Joint Interventions in the Management of Chronic Spinal Pain: American Society of Interventional Pain Physicians (ASIPP) Guidelines Facet Joint Interventions 2020 Guidelines. *Pain Physician*. 2020;23(3S):S1-S127. [doi:10.36076/ppj.2020/23/S1](https://doi.org/10.36076/ppj.2020/23/S1)
5. Hynes JP, Fhlatharta MN, Ryan JW, MacMahon PJ, Eustace SJ, Kavanagh EC. Complications in image-guided musculoskeletal injections. *Skeletal Radiol*. 2021;50(2):343-349. [doi:10.1007/s00256-020-03565-y](https://doi.org/10.1007/s00256-020-03565-y)
6. Vekaria R, Bhatt R, Ellard DR, Henschke N, Underwood M, Sandhu H. Intra-articular facet joint injections for low back pain: a systematic review. *Eur Spine J*. 2016;25(4):1266-1281. [doi:10.1007/s00586-016-4455-y](https://doi.org/10.1007/s00586-016-4455-y)