



Evidence for Facet Mediated Pain From Whiplash-Associated Disorder Despite a Lack of Imaging Evidence or Radiology Comment

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Purpose Statement

This white paper will describe how the reliance on medical imaging, whether X-ray, MRI or CT, and the absence of radiologist commentary on facet pathology, is fundamentally inconsistent with established medical evidence for determining appropriateness of diagnostic injections.

Executive Summary

Facet joint injuries are most commonly subfailure injuries that occur during a whiplash event. Standard forms of imaging do not reliably determine the presence of these injuries. The nature of the injury can cause persistent pain, even if not described in an image report. Guideline-based practices recommend diagnostic injections to determine the presence or absence of this pathology and is the standard to confidently move forward with therapeutic interventions.

Key Findings

- X-ray, MRI, and CT scans are useful tools for determining pathology such as fracture, disc herniation, bony misalignment (dislocation), nerve impingement, tumors, or vascular pathology.
- Subfailure injuries of the facets occur commonly in whiplash events, and are not easily determined by standard imaging modalities.
- Radiologist commentary on larger pathology is standard of care, and the absence of a description of a facet pathology follows with logic as these are not observed with standard imaging.
- Diagnostic injections are supported by large scale research publications, clinical practice guidelines, and medico-legal standards for determining the presence of a pathological facet in a person with cervical pain.

Implications

Individuals or organizations involved with determining coverage for diagnostic injections for facet pathology are recommended to review the evidence contained within this whitepaper to assist with the process of approval for a patient's diagnostic injections.

Diagnosing Facet Pathology with Imaging in Whiplash-Associated Disorder

The facet joint is a structure in the cervical spine that is subjected to significant stress during a whiplash event.¹⁻³ Irrespective of the direction of impact, facet joints absorb considerable forces that can produce pathology and pain.^{1,2,4-8} With regard to this information, it is logical that the facet joint is the most commonly described pain generator in the Whiplash-Associated Disorder (WAD) literature. In fact, it has been reported that between 29-74% of people suffering from WAD injuries present with facet joint pain symptoms.⁹⁻¹⁴

Despite its prevalence, clinicians are faced with challenges in diagnosing this structure as a part of a pain presentation. Conventional imaging may appear normal in patients suffering from WAD.^{15,16} X-rays often show spinal degeneration, but this has a weak correlation with neck symptoms.^{17,18} Magnetic Resonance Imaging (MRI) is helpful for soft tissue visualization, but has not reliably demonstrated consistency with determining pathology of the facet joints.¹⁹⁻²¹ Computed Tomography (CT) imaging can determine bony pathology such as fractures or dislocations, but is also ineffective in diagnosing pain from a cervical facet joint.^{22,23} In fact, many studies investigating the correlation between symptoms of facet pathology and imaging findings failed to find strong connections between the two.²⁴⁻²⁶ With consideration of these facts, it is logical that consensus practice guidelines from both 2021 and 2025 both recommend against the use of diagnostic imaging as a reference standard for diagnosing cervical facet pain.^{27, 28}

Painful Cervical Facet Joint Diagnosis Through Diagnostic Injections

The absence of certainty from imaging requires a diligent history and physical examination by the clinician for an index of suspicion to be present for a facet pathology to be present in the WAD patient. As the physical examination cannot completely determine the presence of facet pathology, diagnostic injections are utilized as a confirmatory and concurrent therapeutic tool in the hands of the physician.⁹ This standard and logical practice for diagnosis and management is supported by not only large scale research trials, but also within published clinical practice guidelines.^{27,38-40}

The multitudinous current literature supporting the use of diagnostic injections for the benefit of the patient demonstrates consensus on this topic. Hellinga et al. stated “Since history, physical examination, and radiological studies are unable to definitively diagnose cervical facet joint pain, diagnostic blocks with local anesthetic are the most widely accepted approach to identify putatively painful facet joints and select patients for RF ablation.”⁹ In the aptly titled publication “Chronic Neck Pain with Normal Imaging: Diagnostic and Management Challenges”, the authors state that diagnostic blocks remain the gold standard for diagnostic confirmation of facet pathology.¹⁹ This statement is also echoed by Won and Kim’s 2025 publication as well as Sharma’s 2025 publication in the discussion of diagnostic blocks for cervical pathology.^{41,42} Engel et al. described in their study on the crucial utilization of diagnostic injections: “There is moderate-quality to high-quality evidence that using comparative blocks with 100% relief of index pain offers patients a 61% chance of achieving complete relief of pain—which is the outcome that patients most desire. Moreover, the published evidence shows that this relief is accompanied by restoration of activities of daily living and no need for other health care for neck pain.”³⁹

From a medico-legal perspective, Lawson’s 2020 publication wrote convincingly the role of the diagnostic facet injection for greater certainty in diagnosis. The authors published two outstanding statements on this subject:

1. We conclude that there is convincing scientific medical evidence that the results of cervical facet blocks provide reliable objective evidence of chronic post-traumatic spine pain, suitable for presentation to an adjudicative decision maker.
2. In reviewing Canadian case law, diagnostic facet block injections have provided objective evidence and appear to be an underutilized but accepted tool for assessment of back or neck pain. As such, there should be consideration given to retaining a specialist in pain management to perform medial branch block injections in cases where subjective symptoms of neck pain are primarily at issue and there is no obvious objective initial injury, such as a fracture.

Lastly, Medicare local coverage determination standards describe intraarticular facet blocks and medial branch blocks to be medically reasonable and necessary for diagnosis and treatment of facet pathology.⁴³

Conclusion

In the state of facet pathology, overwhelming research consensus and general standards of care are in support of the use of diagnostic injections over imaging findings to determine the presence of facet pathology. Subfailure injuries are the most common cause of the wide-spread prevalence of this type of pain, and these are not easily seen in standard imaging types. Lack of radiologist comment on a facet pathology not only rules out other more urgent diagnostic findings but follows with standards of practice to confirm to interventional physicians that the next step in workup is a diagnostic injection. The evidence in this whitepaper clearly demonstrates this standard of practice for helping those suffering from facet-mediated pain associated with WAD.

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