Non-CME Webinar Series
designed with the trainee in mind
first Tuesday of the month

ASRA PAIN MEDICINE
THE ASSOCIATION OF PAIN PROGRAM DIRECTORS

Radiofrequency Interventions for the Facet Joints: Background, Improving Outcomes, and Guidelines

Tuesday, November 7, 2023

7-8:30 pm ET

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Consensus practice guidelines on interventions for lumbar facet joint pain from a multispecialty, international working group – *Key Highlights*

Eric J. Wang, MD

Program Director, Pain Medicine Fellowship, Johns Hopkins Hospital

Assistant Professor, Department of Anesthesiology and Critical Care Medicine

Johns Hopkins University School of Medicine

Regional Anesthesia & Pain Medicine

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Cohen SP, Bhaskar A, Bhatia A, *et al* Consensus practice guidelines on interventions for lumbar facet joint pain from a multispecialty, international working group. *Regional Anesthesia & Pain Medicine* 2020;**45**:424-467.

Special article

OPEN ACCESS

Consensus practice guidelines on interventions for lumbar facet joint pain from a multispecialty, international working group

Steven P Cohen ,[1] Arun Bhaskar,[2] Anuj Bhatia,[3] Asokumar Buvanendran,[4] Tim Deer,[5] Shuchita Garg,[6] W Michael Hooten ,[7] Robert W Hurley,[8] David J Kennedy,[9] Brian C McLean,[10] Jee Youn Moon,[11] Samer Narouze,[12] Sanjog Pangarkar,[13] David Anthony Provenzano,[14] Richard Rauck,[15] B Todd Sitzman,[16] Matthew Smuck,[17] Jan van Zundert ,[18,19] Kevin Vorenkamp,[20] Mark S Wallace,[21] Zirong Zhao[22]

Why do we need these guidelines?

Lumbar facet interventions are the 2nd-most common interventional pain procedure in the US

Utilization has been increasing, attracting the attention of healthcare payors

Inconsistent practices → mixed outcomes (clinically/research/authorizations and reimbursements)

What is the value of history and physical examination for patients for diagnostic blocks?

There are no examination or historical signs that reliably predict response to lumbar facet blocks. Paraspinal tenderness and radicular symptomatology may be *weakly predictive* of positive and negative blocks, respectively. The levels targeted should be based on clinical presentation (eg, tenderness, pain patterns, imaging if available). (Grade C, low level of certainty)

How much conservative treatment, including physical therapy, should be completed before facet blocks?

Consistent with clinical practice guidelines, we recommend a 3-month trial of different conservative treatments before facet joint interventions. (Grade C, low level of certainty)

What is the necessity of image guidance for lumbar facet blocks and RFA?

CT or preferably **fluoroscopy** for **lumbar MBB**, although ultrasound may be considered in certain contexts. (Grade C, low level of certainty)

For **RFA**, **fluoroscopy** is recommended. (Grade B, low level of certainty)

Should medial branch blocks (MBB) or intra-articular (IA) injections precede RFA?

MBB should be the prognostic injection of choice before RFA. IA injections may be used for both diagnostic and therapeutic purposes in some individuals (eg, young people with inflammatory pain, people at risk of RFA complications). (Grade C, moderate level of certainty)

What is the effect of sedation on diagnostic and prognostic utility?

Sedation should not be routinely used in the absence of individual indications. (Grade B, low-to-moderate level of certainty)

What is the ideal volume for facet blocks?

Lumbar MBB should be performed with a volume **<0.5 mL** to prevent spread to adjacent structures. (**IA** injections should be done with a volume <1.5 mL to prevent aberrant spread and capsular rupture.) (Grade C, low level of certainty)

What is the ideal cut-off for designating a prognostic block as positive?

We recommend **≥50% pain relief** be used as the threshold for designating a prognostic block as positive, but recognize that using higher cut-off values may result in higher RFA success rates. Secondary outcomes such as activity levels may also be considered when deciding whether to proceed with RFA. (Grade B, moderate level of certainty)

How many prognostic blocks should be performed before RFA?

We recommend **a single block**. Although using multiple blocks may improve RFA success rates, it will also result in patients who might benefit from RFA being denied treatment. (Grade C, low-to-moderate level of certainty)

**Note: some insurance payors require two positive blocks.*

Is there evidence that larger RF lesions sizes improve outcomes?

There is indirect evidence, and limited direct evidence, that techniques that result in larger lesions (eg, **larger electrodes**, **higher temperatures**, **longer heating times**, **proper electrode orientation**, **fluid modulation**) improve outcomes.

(Grade C, low level of certainty that larger lesions increase the chance of capturing nerves. Grade I, low level of certainty that larger lesions increase duration of pain relief.)

What is the ideal RF electrode placement orientation?

We recommend positioning the electrode in an orientation near-parallel to the nerve.* (Grade B, low level of certainty)

*Conventional/“traditional” RFA

*For further reading: *Tran J, Peng P, Loh E. Anatomical study of the medial branches of the lumbar dorsal rami: implications for image-guided intervention. Reg Anesth Pain Med. 2022 May 19:rapm-2022-103653. doi: 10.1136/rapm-2022-103653. Epub ahead of print. PMID: 35589133.*

Should sensory and motor stimulation be performed before RFA?

Sensory stimulation should be used when single lesions are anticipated. (Grade C, low level of certainty)

When multiple lesions are planned, the evidence for sensory stimulation is inconclusive. (Grade I, moderate level of certainty)

Motor stimulation may be beneficial for safety and effectiveness purposes. (Grade B, low level of certainty)

What are some measures for mitigating the risk of complications?

- Anticoagulation medications should be continued for facet blocks and RFA, and cases that might warrant discontinuation should be discussed with relevant healthcare providers. (Grade B, moderate level of certainty)

- Injection of steroid after RFA may prevent neuritis. (Grade C, low level of certainty)

- Confirming electrode placement in multiple views and using sensorimotor testing may reduce the risk of nerve root injury. (Grade B, low level of certainty)

What are some measures for mitigating the risk of complications?

- RFA can result in paraspinal muscle degeneration and possibly disc degeneration, though the **clinical relevance of this is unclear**. We recommend a **discussion** of this possibility with patients, and consideration of **physical therapy** before and after RFA to reduce the risk. (Grade C, low level of certainty)

What are some measures for mitigating the risk of complications?

- Interference with implanted electrical devices can occur, and physicians should consult with relevant healthcare teams regarding recommendations (eg, programming **pacemakers** to **asynchronous mode**, **turning off neurostimulators**). Bipolar modes may be safer than monopolar, and grounding pads should be placed away from implanted cardiac devices, but not too close to the neurotomy site (risk of tissue burn). Avoid excessive sedation. (Grade C, low level of certainty)

What are some measures for mitigating the risk of complications?

- Burns may occur from equipment malfunction or lesion extension to the skin (less likely). Checking equipment, and properly positioning the grounding on a dry, clean-shaven lower extremity devoid of scars may minimize this risk. (Grade B, moderate-to-high level of certainty)

- Prior spine surgery is associated with lower RFA success rates, and physicians should check placement of RF probes in multiple fluoroscopic views and avoid contact with hardware to prevent thermal injury. (Grade C, low level of certainty)

How often may RFAs be repeated?

- We recommend repeating RFA in individuals who obtained at least 3 (and preferably 6) months of relief, up to two times per year. The success rate for repeat RFA decreases for successive procedures but remains above 50%. (Grade B, moderate level of certainty)

- Repeating prognostic blocks is not routinely necessary in patients who experience a recurrence of their baseline pain in a physiological timeframe. (Grade C, low level of certainty)

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ADVANCING EDUCATION IN MULTIDISCIPLINARY PAIN MEDICINE

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