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

ASRA PAIN MEDICINE
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Guidelines On Cervical Facet Joint Pain

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Tuesday, November 7, 2023

Disclosure

I do not have a financial relationship or interest with any entity producing healthcare goods or services in conjunction with this talk.

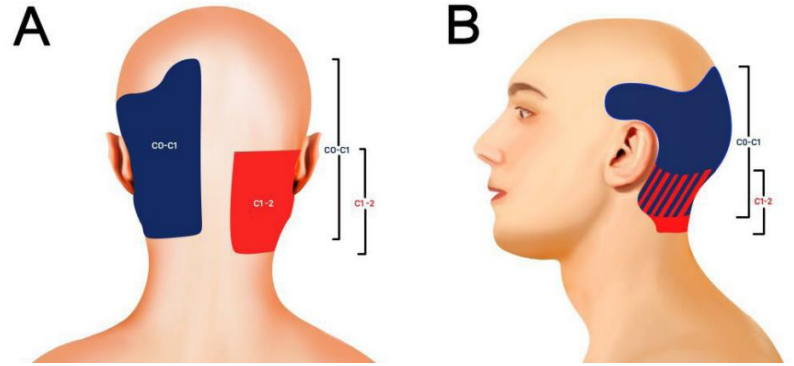
Consensus practice guidelines on interventions for cervical spine (facet) joint pain from a multispecialty international working group

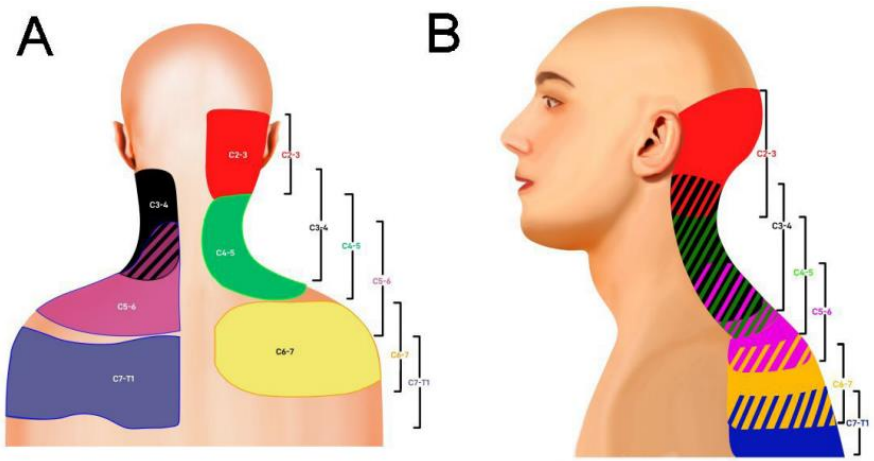
Robert W Hurley,[1] Meredith C B Adams ,[2] Meredith Barad,[3] Arun Bhaskar,[4] Anuj Bhatia ,[5] Andrea Chadwick ,[6] Timothy R Deer ,[7] Jennifer Hah,[8] W Michael Hooten ,[9] Narayan R Kissoon,[10] David Wonhee Lee,[11] Zachary Mccormick,[12] Jee Youn Moon ,[13,14] Samer Narouze ,[15] David A Provenzano,[16,17] Byron J Schneider,[18] Maarten van Eerd,[19] Jan Van Zundert,[19] Mark S Wallace,[20] Sara M Wilson,[21] Zirong Zhao,[22] Steven P Cohen [23]

Hurley RW, et al. Reg Anesth Pain Med 2022;47:3–59.

Prevalence and pain referral patterns

- Cervical facet joints: primary source
  - 26–70% pts with chronic neck pain
  - 54–60% neck pain following whiplash injury
- Most common: C2–3 (36%) > C5–6 (35%) > C6–7 (17%).
- C1–2, C3–4, C4–5, each < 5% of cases
- C2–3: etiology of cervicogenic HA
- Pain referral patterns





Diagnostic/prognostic - H&P, imaging?

- H&P
  - Not diagnostic
  - Not prognostic
  - Guide diagnostic block segments:
    - match pain distribution with pain referral patterns
    - identify tender areas under fluoroscopy
  - + response to facet interventions: +h/o whiplash and +TTP
  - Imaging: insufficient evidence
    - diagnose cervical facetogenic pain
    - predict success of cervical MBB or RFA

Diagnostic/prognostic –joint injection, MBB?

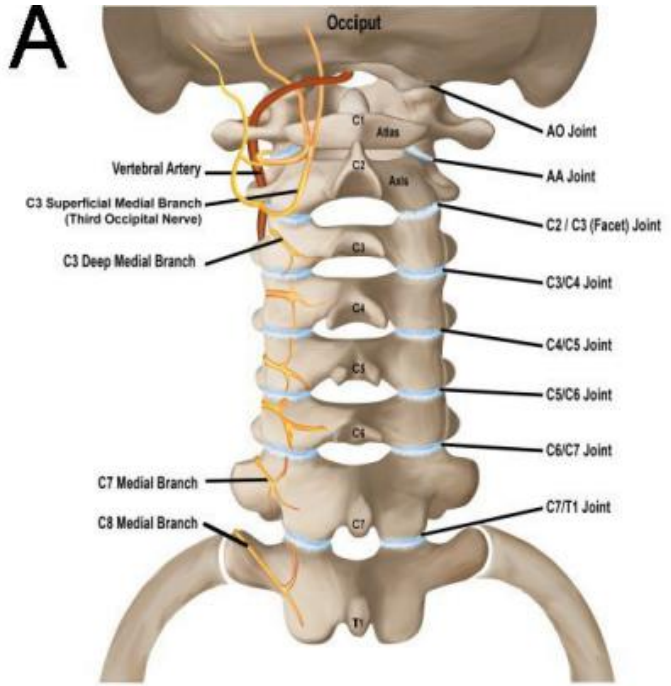
- AO and AA joint inj with LA: diagnostic and prognostic for IA steroid inj
- Other facets IA inj: confirmatory, but high technical failure rates
- C3-C8 MBB with LA: diagnostic
- IA inj are less predictive than MBB for response to MB RFA

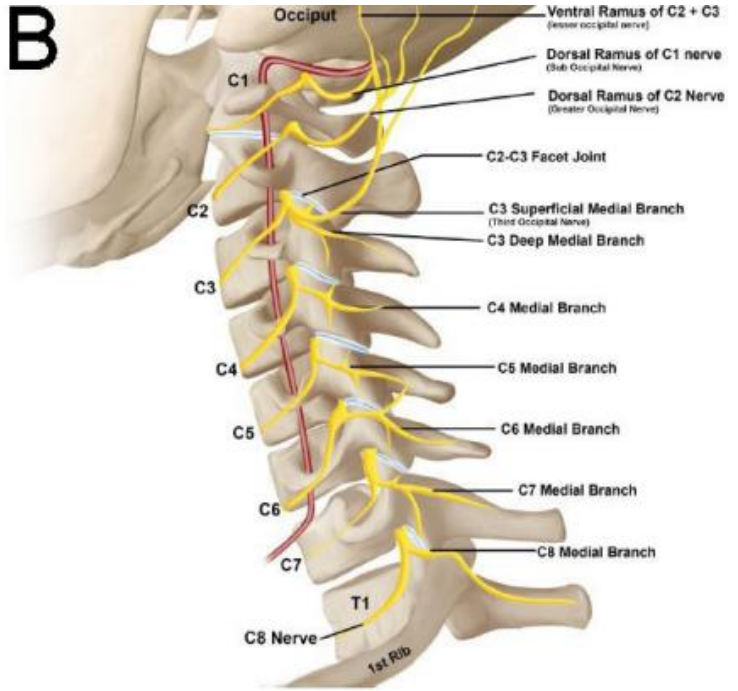
Conservative treatments?

- 6 weeks prior to cervical facet blocks
- Continue conservative measures to accompany prognostic blocks

Cervical facet joint innervations

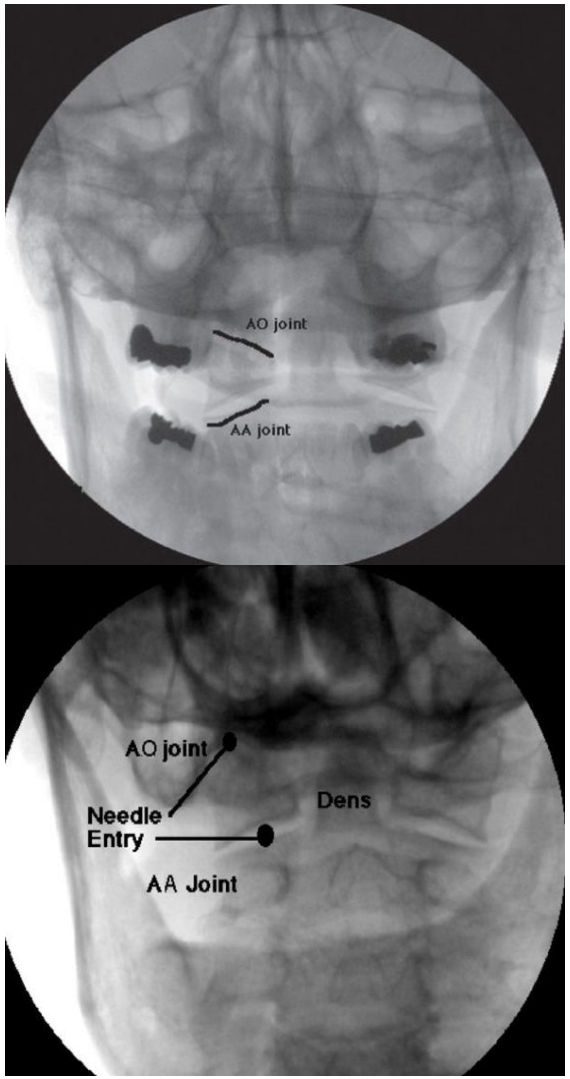
- AO, AA: ventral rami of C1 and C2, respectively
- C2–3: TON
- C3-4: C3 and C4 MB
- Each MB: the joint above and below
- Facet interventions: IA inj, MBB, RFA





AO and AA joint injections

- C-spine CT or MRI: ascertain pathology and help guide needle trajectory
- Approach: posterior
- Fluoroscopy: DSA in both AP and lat views, confirm IA spread
- Volume: <1mL
- Steroids:
  - some evidence for AO and AA inj.
  - If steroids used, non-particulate

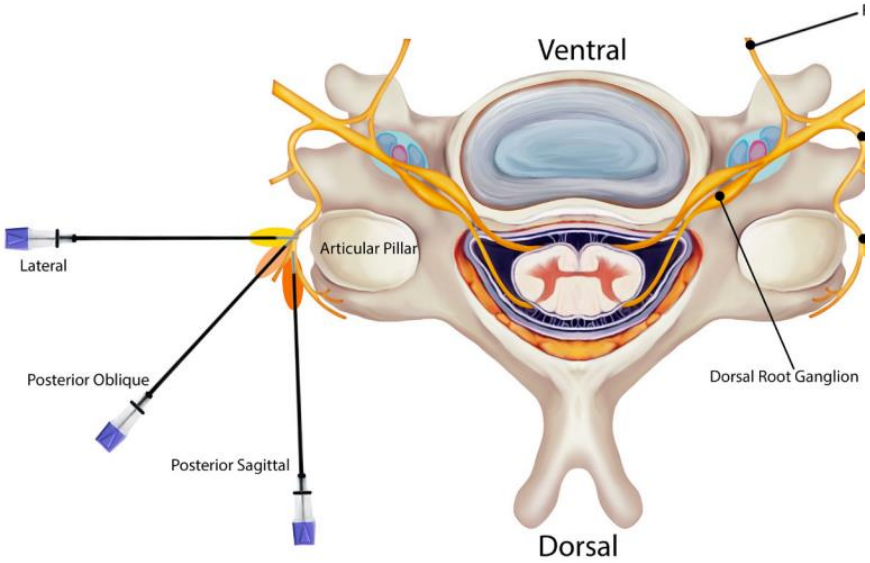


Other facets IA injections

- Against: routine use of IA injections, only use in pts
  - no access to RFA
  - at risk of adverse consequences from RFA
  - prolonged relief from previous diagnostic inj
  - Guidance: fluoroscopy
- Volume: ≤1ml, including contrast

Cervical MBB

- Sedation: no (increase false positives)
  - light sedation only in special conditions (anxiety, PTSD)
- Guidance: fluoroscopy or US
- Approach:
  - Lat: TON and C3–C7 MBB, short 25 G needle
  - Post or post oblique: C8 MBB
- Volume: ≤0.3ml
- Steroids: avoid routine use w cervical MBB

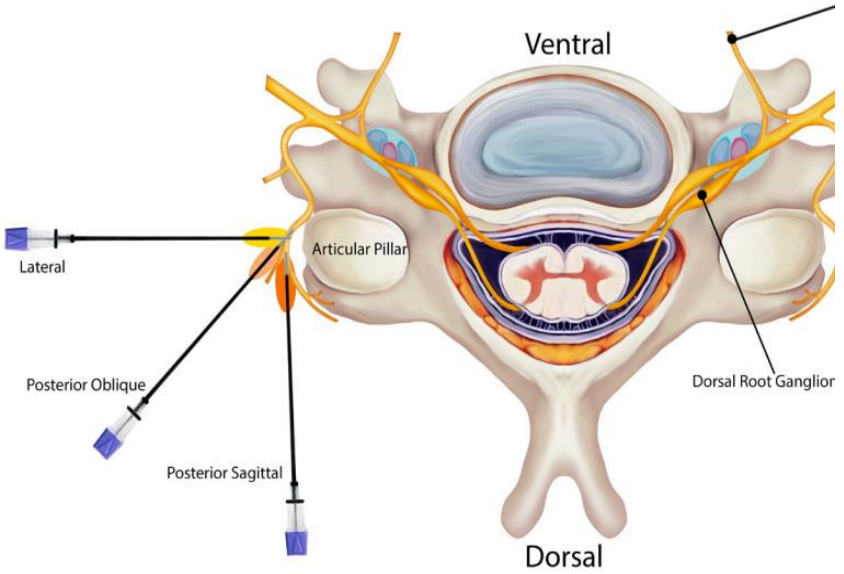


Cervical MBB

- Sides: b/l MBB, including TON, can be done
- Levels: avoid MBB at > two levels at same visit
- Single or dual block:
  - Single prior to RFA
  - Dual blocks: may increase RFA success rate, also increase false-negatives and decrease overall success rate
- Positive block: ≥50% pain relief
- Activity level: in conjunction w pain assessment (but not sole criterion)

Cervical MB RFA

- Side: unilateral
- Guidance: fluoroscopy
- Needle placement:
  - Traditional RFA: near-parallel (post. or slight post. oblique) to MB
  - Cooled RFA: lat. approach
  - s/p surgeries on articular pillars: avoid or
    - Advanced imaging (CT) guidance
    - Post. oblique with greater angulation or lat.
    - Multiple lesions if necessary

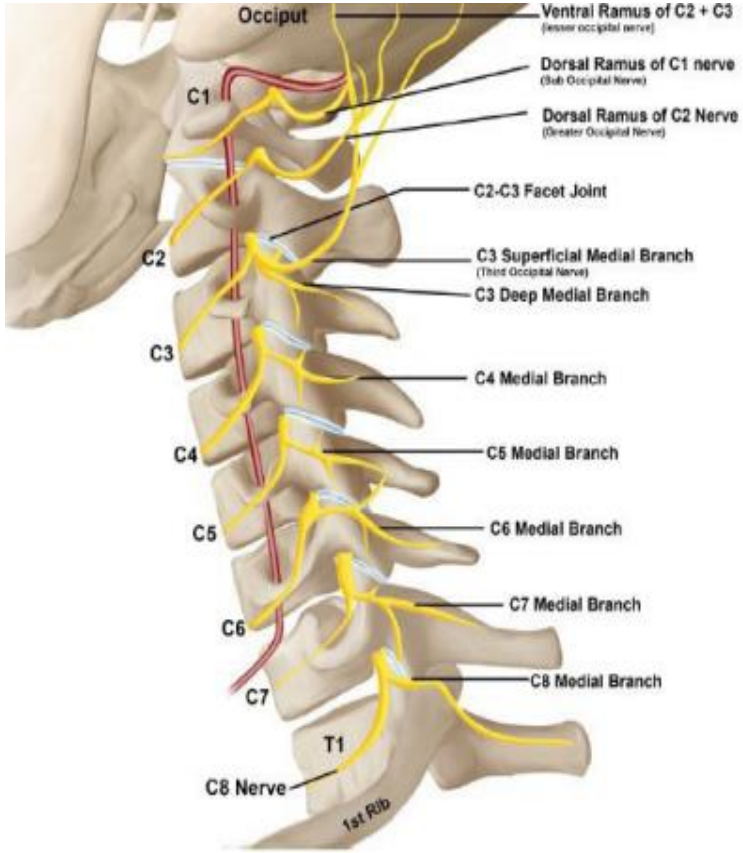


Cervical MB RFA

- Sensory testing:
  - single lesions and/or C2–3 facet RFA
  - multiple lesions: evidence inconclusive
- Motor testing: beneficial for both safety and efficacy
- Lesion size:
  - some evidence: larger lesions to capture MB and increase duration of pain relief
  - limit damage to untargeted structures
  - multi-lesion, smaller gauge and/or shorter active tip cannula
  - sequential needle placement for each MB no more than 1 or 1.5 needle widths apart

Complications of RFA - vascular

- Pre-procedure:
  - review MRI or CT images
  - US scan
- Intra-procedure:
  - Position cannula tip in the post. 2/3 of the C2-3 joint line
  - Avoid the ant. part of the inf. C2 facet pillar
  - aspiration, contrast, real-time fluoroscopy/DSA



Complications of RFA - neuritis

- Discuss adverse effects of RFA: pain, dysesthesias, numbness, dizziness, and ataxia lasting for days to weeks
- Risk factors: younger pts, upper cervical MB RFA
- Prevention:
  - Short course (3 days) of NSAIDs right after RFA
  - steroids (non-particulate) through cannula after RFA

Complications of RFA - nerve injury

- True AP and lat fluoroscopic views during RFA
- An additional contralateral oblique view to confirm the position of needle tip
- Sensorimotor testing: response not in radicular distribution

Complications of RFA - muscle denervation

- Discuss w patients
- Avoid multilevel (>2 joints) and/or bilateral RFA at a single visit (possible loss of function of cervical extensors)
- PT to restore the function of paraspinal muscles prior to and after

Complications of RFA - tissue burn

- RFA equipment (properly functioning)
- Large grounding pad on dry clean shaven skin
- Pedicle screws: post. approach, RF cannula not touching screw

Complications of RFA - anticoagulation

- Review guidelines
- Consult prescribing MD, weigh risks and benefits, discuss w pt
- Anticoag continued: adjust needle size, trajectory, and use pre- and peri-procedural imaging

Complications of RFA - implanted devices

- Review guidelines
- Consult device managing teams, follow recs, discuss w pt, joint decision
- If RFA is performed:
  - Neurostimulators - program to lowest setting and turn off
  - Pacers/ICDs - program pacer to asynchronous mode
- Little or no sedation: detect injury or CV decompensation early
- Turn devices on after RFA and reprogram to pre-procedural settings

Repeat RFA

- Initial RFA: meaningful relief ≥3 months
- Pain: similar in character and location to initial pain
- Repeat: ≤ 2x/year
- Repeat MBB: necessary in most people

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Thank You!