

Critically Appraised Topic: Therapeutic Use of Opioids over NSAIDs can be Effective in Relieving Acute Pain Associated with Temporomandibular Joint Disorders

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Clinical Problem

Temporomandibular disorders (TMDs) are musculoskeletal diseases originating in masticatory muscles, intra-capsular instabilities in TMJ components, or degenerations in bony TMJ components. The prevalence of TMD-related pain has been estimated to be approx. 10% in the general population. Nonetheless, there is no consensus on the management of acute pain related to TMDs.

Clinical Question

In adults with acute pain related to TMD (e.g. myofascial pain, internal derangement of the joint, degenerative joint disease) and no other significant comorbidities, to what extent does therapeutic use of opioids lead to better management (fewer adverse effects, more pain relief and improved function) compared to the use of NSAIDs and acetaminophen over short-term use (1 month)?

Applicability

- Medications is a feasible approach to treating TMD
- While the population of interest and timing of treatment correspond well to our PICO question, the intervention and study settings do not translate well for our study question.
- Disadvantages: Side effects of medications, Potential substance abuse, Lack of evidence

Evidence Search

- Search date: Nov 8th, 2020
- PubMed yield: 70 evidence sources
- Additional searches: Medline, EMBASE, CINAHL, Cochrane

Selected Evidence

1. Liu, Siyan & Hu, Yingshun & Zhang, Xiao. (2020). Do intra-articular injections of analgesics improve outcomes after temporomandibular joint arthrocentesis?: A systematic review and meta-analysis. *Journal of Oral Rehabilitation*. 48. 10.1111/joor.13105.
2. Cigerim, Levent, and Volkan Kaplan. "Analgesic efficacy of naproxen-codeine, naproxen+dexamethasone, and naproxen on myofascial pain: A randomized double-blind controlled trial." *Cranio : the journal of craniomandibular practice*, 1-7. 17 Sep. 2020, doi:10.1080/08869634.2020.1824411

Clinical Bottom Line

A systematic review and a randomized controlled trial have provided low-quality evidence that suggest that therapeutic use of opioids may be effective in pain reduction in patients with acute pain related to TMD compared to NSAIDs and acetaminophen over short-term use.

Evidence Quality

- **Strengths:**
 - Evidence 1: Two independent authors, Risk of bias analysis conducted, PRISMA diagram, GRADE tool, Hand searching of bibliography of included studies
 - Evidence 2: Randomized concealed allocation of intervention, Minimized assessment bias, Recent study, Outcome assessment tools validated
- **Limitations:**
 - Evidence 1: Limited evidence for NSAID studies, Low quality of evidence (selection, attrition, reporting biases), Small sample size RCTs, Lack of arbitrator, No grey literature searched
 - Evidence 2: Biases not discussed (possible blinding, attrition biases), Examiner reliability not reported, No regression analysis, No intention-to-treat analysis, No examiner liability assessment



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