

The Opioid Epidemic and Nonopioid Analgesics for Women with Chronic Noncancer Pain

Background

- The opioid epidemic during the late 1900s to early 2000s rattled the United States.
- Opioids have become the standard of care, yet increased risks such as dependence, abuse, and overuse accompany them.
- Pharmacologic therapies shown to comparatively improve CNCP include NSAIDs, TCAs, and synthetic cannabinoids
- Women are more likely to suffer from moderate-severe CNCP than men, resulting in more women being prescribed opioids increasing their abuse and dependence rate.

PICO Question

- In adult women with chronic non-cancer pain (P), do non-opioid analgesics (I) compared to opioid analgesics (C) relieve pain and decrease rates of opioid dependency and mortality (O)?

Research Methods

- Boolean operators were used to combine the terms and narrow the search: “efficacy” AND “opioid analgesics” AND “non-opioid analgesics” on CINAHL; “efficacy” AND “opioid analgesics” AND “non-opioid analgesics” AND “chronic non-cancer pain” on PMC and PubMed.
- Additional search terms like “mortality” and “opioid overdose” were added to each database to further narrow the search.
- 92 articles were yielded on CINAHL, 140 articles on PMC, and 10 results on PubMed.
- Screening of titles across all databases results in 2 applicable studies on PubMed, 5 on CINAHL, and 5 on PMC.
- 11 were selected for the literature review with a focus on study objectives, design, sample, methods, and results.

Results

Article	Level	Major findings & Implications
Effect of Opioid vs Non Opioid Medications on Pain-Related Function in Patients With Chronic Back Pain or Hip or Knee Osteoarthritis Pain: The SPACE Randomized Clinical Trial.	Level 1	Use of opioid vs non opioid therapy over the span of 12 months showed no significantly better pain related function on an 11-point scale. Overall P=.58, p=1 would signify significance.
A comparison of the abuse liability of tramadol, NSAIDs, and hydrocodone in patients with chronic pain.	Level 11	Results found women were more susceptible to increased rates of abuse/dependence in chronic pain. They support the hypothesis that tramadol is not significantly greater than NSAIDs Within each arm roughly 70% completed the interviews. Individuals who did not complete all nine interviews were still included in the study which could have skewed results.
Opioide bei chronischen nicht-tumorbedingten Schmerzen - sind sie Nichtopioidanalgetika überlegen? Systematische Übersicht und Metaanalyse der Wirksamkeit, Verträglichkeit und Sicherheit in randomisierten Direktvergleichen von Opioiden und Nichtopioidanalgetika über mindestens 4 Wochen [Opioids in chronic noncancer pain-are opioids superior to nonopioid analgesics? A systematic review and meta-analysis of efficacy, tolerability and safety in randomized head-to-head comparisons of opioids versus nonopioid analgesics of at least four week's duration].	Level 1	No significant difference between opioids and non-opioid analgesics. No significant difference between opioids and non-opioid analgesics in 50% pain reduction. Non-opioid analgesics were superior to opioids in improving physical function. No significant difference between opioids and non-opioid analgesics in drop-out rates due to lack of effectiveness. Opioid therapy resulted in higher drop-out rates due to adverse events. No significant difference between opioids and non-opioid analgesics in serious adverse events. No deaths in either group.
Health-Related Quality of Life among Chronic Opioid Users, Nonchronic Opioid Users, and Nonopioid Users with Chronic Noncancer Pain.	Level 3	PCS12 was not significantly different between non chronic versus non opioid users, chronic vs nonopioid users. The same was found for MCS12 scores. According to the data collected, opioid use in patients with CNCP was not correlated with better health related quality of life.
<i>Opioid Use Disorder in Women and the Implications for Treatment</i> Psychiatry Research and Clinical Practice.	Level 4	The article notes practice gaps in preventing the rising death rate among women by opioid overdose. Research on sex and gender differences is necessary for treatment implementation. There is an increase in overdose deaths in women vs. men. Mental health concerns for women could be a co occurring factor to be addressed in a separate study.
Predictors of change in pain and physical functioning among post-menopausal women with recurrent pain conditions in the women's health initiative observational cohort.	Level 4	Factors such as BMI, physical condition, nonpain symptoms, medical comorbidities, and depression were associated with worsening pain and physical functionality. Additionally, prescription opioids showed no improvement in baseline pain improvement and even worse long-term pain outcomes in this population were seen after 3 years.
All-cause mortality in patients with long-term opioid therapy compared with non-opioid analgesics for chronic non-cancer pain: a database study.	Level 5	The results showed that long-term opioid therapy had an increased risk for all-cause mortality in comparison to non-opioid analgesics. In patient populations of similar demographics, it is important to discuss non-analgesics first before initiating opioids. If opioid use is necessary, the risks should be firmly understood and communicated with the patient and patient's family.
<i>Treating chronic pain: The need for non-opioid options.</i>	Level 5	MORE intervention was found to be clinically significant to decrease opioid cravings and reduce pain severity and pain related functional interference, and reduced risk of opioid misuse post treatment.
Pharmacologic management of chronic low back pain: synthesis of the evidence.	Level 5	When comparing the cochrane reviews opioids were more effective than placebo for pain and disability, showing preference toward pain. When compared to NSAIDs opioids did not produce a greater benefit with regard to pain and disability. It was noted the side effects were greater in the opioid trial by 2-9%. Review of RCT noted that antidepressants were not more effective than placebo with respect to pain, function status or depression.
Is opioid therapy for chronic non-cancer pain associated with a greater risk of all-cause mortality compared to non-opioid analgesics. A systematic review of propensity score matched observational studies.	Level 5/6	Opioids are associated with a greater, clinically-relevant all-cause mortality risk over non-opioids. Although confounding could not be entirely excluded, the potential risk of all-cause mortality should be discussed with patients prior to starting opioid therapies.

Summary

- Opioid analgesics have shown an increased association with all-cause mortality risk compared to nonopioid analgesics.
- Opioid therapy was not superior to non-opioid therapy in reducing pain and improving quality of life
- Women with CNCP are more likely to abuse or display dependency on opioids like hydrocodone and tramadol than they did for NSAIDs
- Research recommends NSAIDs for management of CNCP over opioid therapy when safety profile, cost, and long term effectiveness were taken into

Conclusions/Further Study

- Opioid analgesics are associated with a higher rate of abuse and mortality than non-opioid analgesics
- Women are more likely than men to suffer from the adverse effects of opioid therapy resulting in higher rates of opioid overdose and mortality.
- Use of opioid therapy requires assessments of risks versus benefits by healthcare providers
- Although non-opioid analgesics compared to opioid analgesics are less harmful, there is a lack of evidence regarding the safety of long-term use of non-opioid therapy for patients with CNCP
- Appropriate guidelines are needed for the initiation of chronic use of non-opioid therapy for CNCP
- Further research are needed to identify alternatives to management of chronic non-cancer pain

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