PT10

Opioid Tapering and Its Associations with Risk of Opioid Use Disorder and Mortality Among Older Adults

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Background

- Corresponding with CDC's Guideline for Prescribing Opioids for Chronic Pain in 2016 and policies and procedures enacted by payers, quality organizations, and state agencies, prescriptions for opioid medications have witnessed a sharp decreasing trend with increases in opioid dose tapering and discontinuation.
- But opioid-related mortality has not shown a parallel decline.
- Several observational studies have explored the potential adverse effects of opioid dose tapering and discontinuation, with a growing focus on the rate of dose tapering.
- We hypothesized that many of the negative consequences of opioid tapering may be associated with the rate of opioid tapering or discontinuation.

Objectives

- To examine the relationships between rate of opioid tapering and subsequent opioid use disorder (OUD) and all-cause mortality among older adults with chronic non-cancer pain (CNCP) who were on long-term opioid therapy (LTOT).

Methods

- Data: 2012-2018 5% Medicare administrative claims data.
- Study design: nested case-control study.
- Study cohort: ≥ 65 years with CNCP who were on new LTOT, continuously enrolled without cancer diagnosis and hospice use.
- Case definitions: Opioid use disorder and all-cause mortality.
- Cases and controls: Matched 1:2 on age (±1 year) and time of cohort entry (±30 days) using incidence density sampling.
- Key independent variable: Opioid tapering rate – measured during 120-day hazard period prior to index date.

$$V(opioid\ tapering\ rate) = 100 * \left\{1 - \exp\left[\frac{\ln\left(\frac{T+5}{B+5}\right)}{D}\right]\right\}$$

Where B is the average hazard baseline dose, T is the average tapered daily dose, and D is the time in months from the most recent month at the baseline dose to the earliest month at the tapered dose.

- Opioid tapering rate:
  - -10% < V < 10% Steady dose
  - 10% ≤ V ≤ 40% Slow tapering
  - V > 40% Rapid tapering
  - V < -10% Dose escalation
- Conditional logistic regression was used to assess the relationship of interest after accounting for known confounders.

Contact information

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Methods

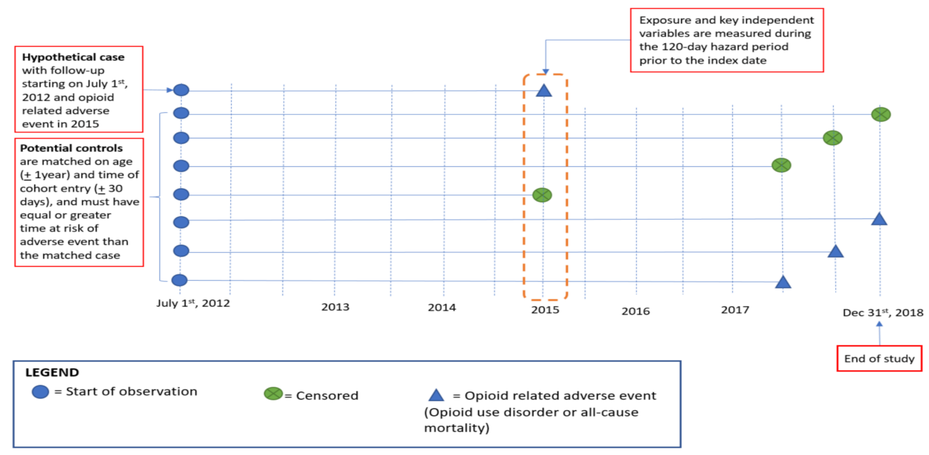

Figure 1. Design of a hypothetical case and characteristics of potential matched controls

Results

- The eligible cohort included 42,091 Medicare beneficiaries. Majority of them were female (70.55%) with a mean age of 75.98 (SD = 8.02) years. Most were Non-Hispanic White (88.63%), had multiple CNCP conditions (61.96%) and 62.48% had a low CCI score.
- Of the eligible beneficiaries, 2,670 (6.34%) experienced OUD, and were matched 1:2 with controls (n=5,340).
- Of the eligible beneficiaries, 4,614 (10.96%) experienced all-cause mortality, and were matched 1:2 with controls (n=9,228).

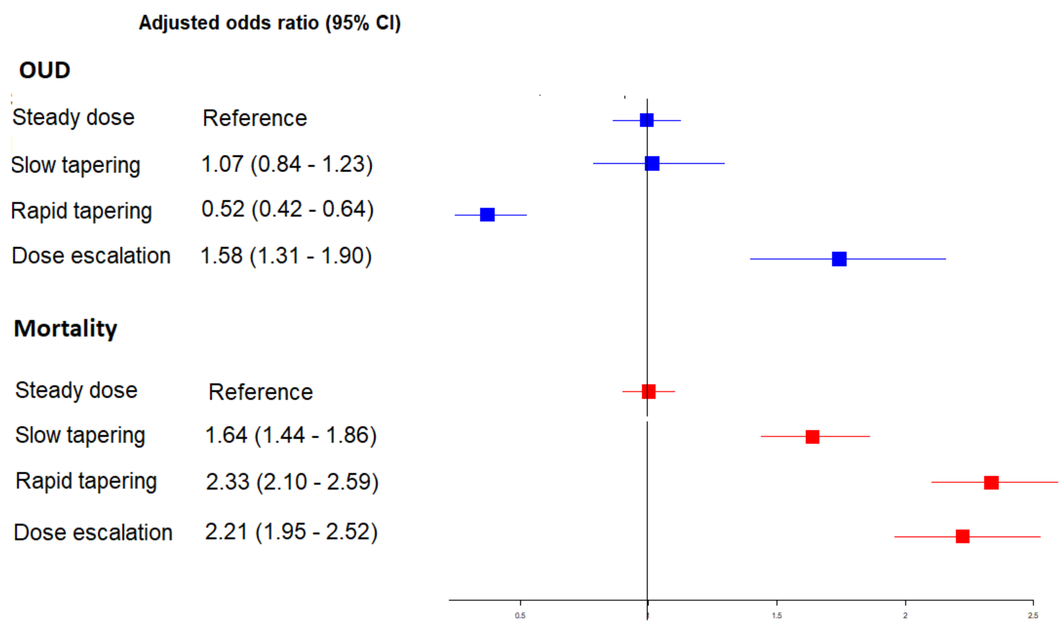

Figure 2. Adjusted relationship between opioid tapering rate and risk of OUD and all-cause mortality

Conclusion

- Slow opioid dose tapering was found to be associated with increased risk of all-cause mortality but not OUD.
- Rapid tapering of opioids was associated with increased risk of all-cause mortality and decreased risk of OUD.
- Opioid dose escalation was associated with both OUD and mortality.
- For patients on LTOT, careful, patient-centered evaluation of the benefits and risks of treatment that incorporates evolving evidence surrounding opioid dose changes is necessary.

Key references

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