Associations between opioid agonist treatment and withdrawal symptoms: Exploratory analyses from the OPTIMA study

Category: Oral Presentation

Abstract Body

Background: There is still a need to ascertain the comparative effectiveness of buprenorphine/naloxone (BUP/NX) and methadone on residual withdrawal symptoms during the first weeks of treatment initiation in prescription-type opioid use disorder (POUD), specifically in those using highly potent opioid use such as fentanyl. We evaluated if the type of treatment (i.e., methadone and BUP/NX) may predict withdrawal symptoms during the first 6 weeks of treatment, and we conducted a subgroup analysis based on fentanyl use status by urine drug screen (UDS) at baseline.

Methods: We used secondary data from the OPTIMA trial, an open-label, 24-week, pragmatic, two-arm, parallel (n=133 in methadone and n=138 in BUP/NX), multi-center, pan-Canadian, randomized controlled trial. We included adults aged between 18-64 years having fulfilled DSM-5 moderate to severe POUD criteria. Dependent variables were opioid withdrawal symptoms captured via the Clinical Opiate Withdrawal Scale (COWS) at weeks 2, 4, and 6 after opioid agonist treatment initiation. Adjusted linear mixed models were employed to study the associations between the assigned treatment group (methadone versus BUP/NX) and COWS scores (weeks 2, 4, 6). Analyses stratified by baseline fentanyl use status (i.e., fentanyl-positive UDS) were conducted.

Results: Overall, COWS scores decreased from 3.13 (SD 3.49) at week 2 to 2.56 (SD 2.98) at week 6. Methadone was associated with more reduction in COWS scores compared to BUP/NX overall in the adjusted linear mixed model (aβ: -0.97; 95%CI: -1.89; -0.05). Stratified analysis by fentanyl use status at baseline showed that methadone had lower COWS scores (specifically at week 2) compared to BUP/NX in those with baseline fentanyl-positive UDS (aβ: 2.25; 95%CI: 3.90; -0.61) with similarly lower COWS scores in both methadone and BUP/NX groups at week 6, but such differences were not present in those with baseline fentanyl-negative UDS (aβ: 0.08; 95%CI: -0.92; 1.07).

Conclusion: Our study showed that methadone is associated with decreased withdrawal symptoms early during treatment initiation compared to BUP/NX but with similarly low withdrawal symptoms at week 6, and such a difference was mainly present in those using fentanyl at baseline. Future studies should ascertain whether withdrawal symptoms during opioid agonist therapy induction and beyond the induction period may impact important outcomes such as opioid use and retention early and later during treatment.

Key Words

- Opiate Agonist Therapy
- Opioids/Opiates
- Pharmacologic Interventions
- Treatment Models/Programs
- Withdrawal Management

Learning Objective # 1

Presenting my methodology and research results to other researchers and knowledge users and receiving their feedback. Raising awarness on the importance of detecting early withdrawal symptoms during opioid use disorders treatment.

Learning Objective # 2

Showing the specificity of agonist treatment type on early withdrawal symptoms as a function of baseline fentanyl use.

Reference # 1

Gowing, L., Ali, R., White, J. M., & Mbewe, D. (2017). Buprenorphine for managing opioid withdrawal. Cochrane Database Syst Rev, 2(2), Cd002025. https://doi.org/10.1002/14651858.CD002025.pub5

Reference # 2

Kosten, T. R., & Baxter, L. E. (2019). Review article: Effective management of opioid withdrawal symptoms: A gateway to opioid dependence treatment. Am J Addict, 28(2), 55-62. https://doi.org/10.1111/ajad.12862

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