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CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Antidepressants for Adults with Depression using Opioid Medications: Clinical Effectiveness and Guidelines

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About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

Research Questions

1. What is the clinical effectiveness of antidepressants in adults with depression using opioid medications?
2. What are the evidence-based guidelines informing the use of antidepressants in adults with depression using opioid medications?

Key Findings

Two systematic reviews, one meta-analysis, four randomized controlled trials, and one evidence-based guideline was identified regarding the clinical effectiveness of antidepressants in adults with depression using opioid medications.

Methods

A limited literature search was conducted on key resources including Medline, PsycINFO, PubMed, The Cochrane Library, and the University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2003 and February 9, 2018.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Adults with depression using opioid medications (e.g., opioid use disorder, misuse of opioids, use of opioids as prescribed)
Intervention	Antidepressants of any kind
Comparators	Q1: Non-drug therapies for depression (e.g., psychosocial; behavioural interventions; CBT); Placebo; No treatment Q2: No comparator
Outcomes	Q1: Clinical benefit and/or efficacy (e.g., improved symptoms of depression, quality of life, function, continuation in a program of treatment for OUD), harm and/or safety (e.g., drug interaction) Q2: Guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Two systematic reviews, one meta-analysis, four randomized controlled trials, and one evidence-based guideline was identified regarding the clinical effectiveness of antidepressants in adults with depression using opioid medications. No health technology assessments or non-randomized studies were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

Two systematic reviews (SRs)[1-2] and one meta-analysis[3] were identified. When compared to patients taking placebo, patients receiving opioid agonist therapies and also being treated for symptoms of depression or anxiety experienced significant advantages when treated with antidepressants.[1] Tricyclic antidepressants (TCAs) had a significant positive effect on depression scores over placebo; however, selective serotonin reuptake inhibitors had no significant effect when compared to placebo.[1] In a second SR,[3] studies with low risk of bias showed that antidepressants performed worse than placebo for patients with depression. When examining the severity of depression, antidepressants performed better in studies that used the Clinical Global Impression Scale; however, there was no difference in studies that used the Hamilton Depression Rating Scale.[3] TCAs were also favoured when examining the severity of depression; however, placebo was favoured when examining adverse events.[3] In patients currently on methadone maintenance treatment (MMT) with unipolar major depressive disorder (MDD) or dysthymia, there were no statistically significant differences in depression outcomes between antidepressant treatment and placebo.[2]

The authors of one randomized controlled trial (RCT)[4] observed that fluoxetine significantly improved depression scores in HIV-positive individuals who had not used illicit drugs in the past 90 days. In a second RCT,[5] the authors observed that, when compared to placebo, buproprion improved sexual dysfunction in men receiving MMT but it had no effect on depression severity. The authors of a third RCT[6] observed that treatment with escitalopram did not lower the likelihood of testing positive for opiates in patients with opioid dependence. However, in positive environments, sertraline had a positive effect on depression outcomes and increased the odds of being abstinent from heroin.[7]

One evidence-based guideline was identified.[8] Third-choice recommendations were made for comorbid substance use disorder and MDD; however, there was no additional information available in the abstract regarding opioid disorders and MDD.[8]

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

1. Hassan AN, Howe AS, Samokhvalov AV, Le Foll B, George TP. Management of mood and anxiety disorders in patients receiving opioid agonist therapy: review and meta-analysis. Am J Addict. 2017 Sep;26(6):551-63.
PubMed: PM28675762

2. Pedrelli P, Iovieno N, Vitali M, Tedeschini E, Bentley KH, Papakostas GI. Treatment of major depressive disorder and dysthymic disorder with antidepressants in patients with comorbid opiate use disorders enrolled in methadone maintenance therapy: a meta-analysis. J Clin Psychopharmacol. 2011;31(5):582-6.
PubMed: PM21869696

3. Pani PP, Vacca R, Trogu E, Amato L, Davoli M. Pharmacological treatment for depression during opioid agonist treatment for opioid dependence. Cochrane Database Syst Rev. 2010 Sep 8;(9):CD008373.
PubMed: PM20824876

Randomized Controlled Trials

4. Grelotti DJ, Hammer GP, Dilley JW, Karasic DH, Sorensen JL, Bangsberg DR, et al. Does substance use compromise depression treatment in persons with HIV? Findings from a randomized controlled trial. AIDS Care. 2017;29(3):273-9.
PubMed: PM27590273

5. Salehi M, Barekatain M, Faghani F, Karimian N, Molaeinezhad M, Asadalloahi GA, et al. Bupropion efficacy on sexual dysfunction among male patients on methadone maintenance therapy: a double-blind placebo-controlled trial. Sex Relatsh Ther. 2015;30(3):364-75.

6. Stein MD, Herman DS, Kettavong M, Cioe PA, Friedmann PD, Tellioglu T, et al. Antidepressant treatment does not improve buprenorphine retention among opioid-dependent persons. J Subst Abuse Treat. 2010;39(2):157-66.
PubMed: PM20598836

7. Carpenter KM, Brooks AC, Vosburg SK, Nunes EV. The effect of sertraline and environmental context on treating depression and illicit substance use among methadone maintained opiate dependent patients: a controlled clinical trial. Drug Alcohol Depend. 2004 May 10;74(2):123-34.
PubMed: PM15099656

Non-Randomized Studies

No literature identified.

Guidelines and Recommendations

8. Beaulieu S, Saury S, Sareen J, Tremblay J, Schutz CG, McIntyre RS, et al. The Canadian Network for Mood and Anxiety Treatments (CANMAT) task force recommendations for the management of patients with mood disorders and comorbid substance use disorders. Ann Clin Psychiatry. 2012 Feb;24(1):38-55.
PubMed: PM22303521

Appendix — Further Information

Systematic Review – Unknown Comparator

9. Torrens M, Fonseca F, Mateu G, Farre M. Efficacy of antidepressants in substance use disorders with and without comorbid depression. A systematic review and meta-analysis. Drug Alcohol Depend. 2005 Apr 4;78(1):1-22.
PubMed: PM15769553

Randomized Controlled Trials

Alternative Intervention

10. Stein MD, Solomon DA, Herman DS, Anthony JL, Ramsey SE, Anderson BJ, et al. Pharmacotherapy plus psychotherapy for treatment of depression in active injection drug users. Arch Gen Psychiatry. 2004 Feb;61(2):152-9.
PubMed: PM14757591

Alternative Population

11. Jariani M, Saaki M, Nazari H, Birjandi M. The effect of Olanzapine and Sertraline on personality disorder in patients with methadone maintenance therapy. Psychiatr Danub. 2010 Dec;22(4):544-7.
PubMed: PM21169896

12. Poling J, Pruzinsky R, Kosten TR, Gonsai K, Sofuoglu M, Gonzalez G, et al. Clinical efficacy of citalopram alone or augmented with bupropion in methadone-stabilized patients. Am J Addict. 2007 May-Jun;16(3):187-94.
PubMed: PM17612822