Medication Assisted Treatment for Methamphetamine Use Disorder

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Disclosures

- None
- Slides developed in collaboration with Justin Stamschror, MD - Addiction Psychiatry Fellow, University of Washington
Goals and Objectives

- Review general criteria for Methamphetamine Use Disorder
- Review medication assisted treatments for Methamphetamine
Stimulant Use disorder Criteria

- Often taken in larger amounts or over a longer period than was intended.
- A persistent desire or unsuccessful efforts to cut down or control use.
- A great deal of time is spent in activities necessary to obtain, use, or recover from the substance’s effects.
- Craving or a strong desire or urge to use the substance.
- Recurrent use resulting in a failure to fulfill major role obligations at work, school, or home.
- Continued use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by its effects.
- Important social, occupational, or recreational activities are given up or reduced because of use.
- Recurrent use in situations in which it is physically hazardous.
- Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
- Tolerance.
- Withdrawal.
Methamphetamine Reward Pathway

- https://learn.genetics.utah.edu/content/addiction/mouse/
Methamphetamine reward

Adapted from Di Chiara et al. Neuroscience 1999
Medication Assisted Treatments: Limitations

- Veterans Administration: Evidence-Based Synthesis Program
  - Pharmacotherapy for Stimulant Use Disorders: A systematic review August 2018
    - Only 14 Randomized Control Trials and 1 systematic review published to date
    - Small studies which are underpowered
    - Inconsistent outcome measures and study design
Medication Assisted Treatments: Based on VA Systematic Review, Previous Systematic Reviews and Previous RCTs

- Medications showing no consistent appreciable benefit
  - Sertraline
  - Abilify
  - Modafanil
  - Baclofen
  - Gabapentin
  - Buproprion
  - Naltrexone

- Medications that have some promise
  - Mirtazapine
  - Topiramate
  - Methylphenidate
Topiramate

- No systematic reviews
- 1 RCT (140 participants)
  - Reduced the amount of methamphetamine taken
  - Reduced relapse rates in those who were already abstinent
  - Did not improve abstinence rates

Elkashef et al. 2012
Mirtazapine

- RCT of Men who have sex with Men (60 participants)
  - More negative Urine Analysis in the Mirtazapine group
  - NNT = 3.1 for abstinence from methamphetamine
  - No difference in retention in treatment

Colfax et al. 2011
Methylphenidate - Systematic Review

- 6 Randomized Control Trials
  - 3 of 4 studies found reduction in methamphetamine use while on methylphenidate
  - 5 trials showed no difference in retention

- Notable limitations and future directions
  - Low doses of methylphenidate used
  - Lead in abstinence/detoxification prior to treatment
  - Investigation of interface between ADHD and methamphetamine use disorder

Bhatt et al. 2016
Co-Occurring Disorders

- 28.6% with a primary psychotic disorder
- 32.3% with a primary mood disorder
- 26.5% with a primary anxiety disorder
- 33-40% with a lifetime history of ADHD
References


