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Psychiatry and Addictions Case Conference

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WELCOME!

Today's Topic:

Strategies to help my patients on Meth

I am having trouble with my patients using methamphetamine. Is there anything I can do to help them?

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METHAMPHETAMINE: WHAT TO KNOW ABOUT IT, AND HOW TO TREAT IT

JUSTIN STAMSCHROR, MD

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GENERAL DISCLOSURES

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GENERAL DISCLOSURES

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SPEAKER DISCLOSURES

✓ None

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OBJECTIVES

1. Learn about epidemiology of methamphetamine
2. Look at unsuccessful treatments for methamphetamine
3. Look at successful treatments for methamphetamine

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EPIDEMIOLOGY OF METHAMPHETAMINE USE DISORDER

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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.

PREVALENCE

- Lifetime= 2.1 % in USA
- Point prevalence in USA= 0.32% of Men, 0.23% of women
- Point prevalence worldwide= 0.2-1.3%
  - Higher in SE Asia and East Asia

COMORBIDITY

- 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

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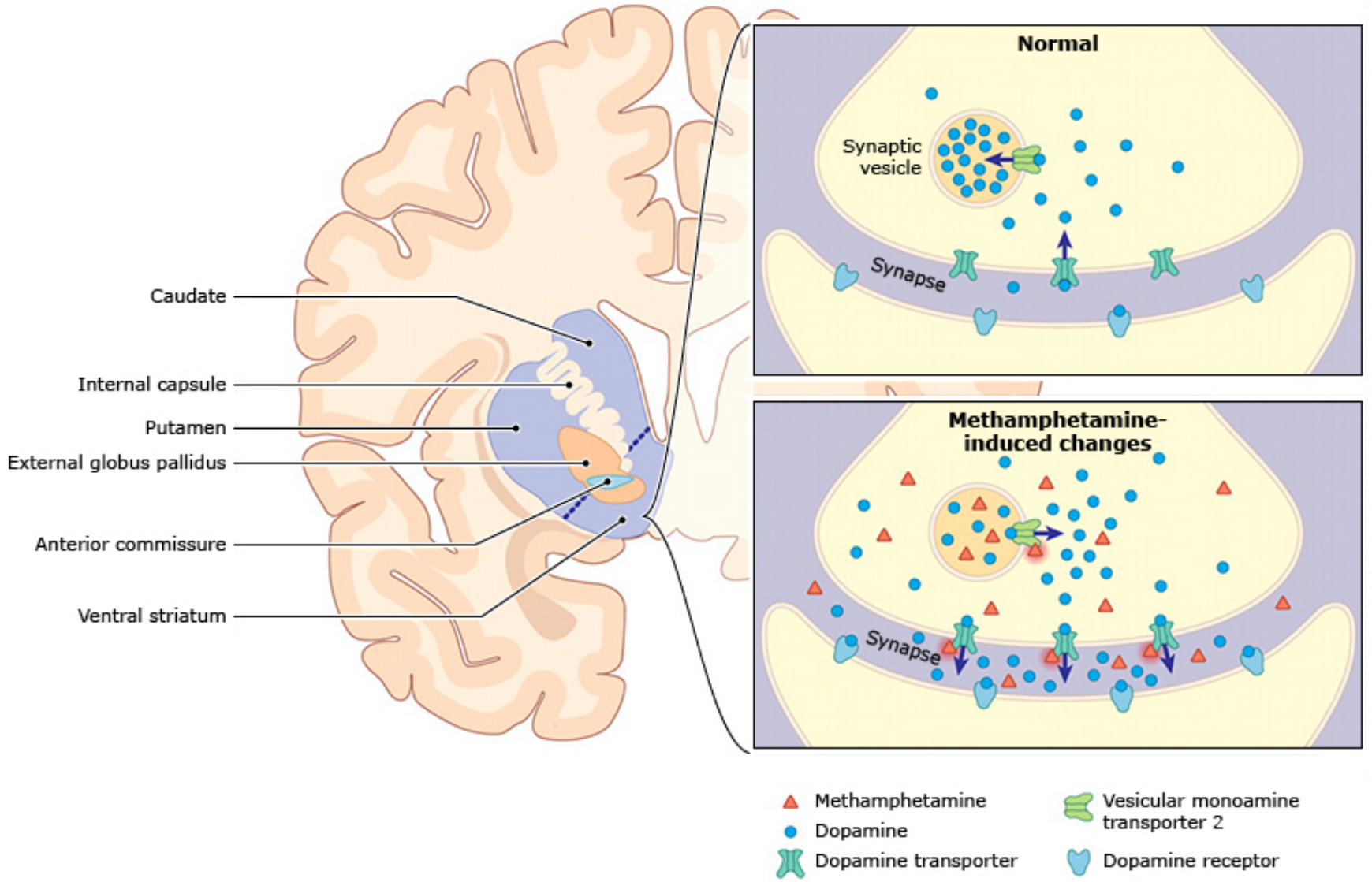
RISKS OF USE

- One study found a 5% mortality risk over 5 years
- 5.6% of patients with cardiomyopathy are meth related
- 8-27% develop methamphetamine induced psychosis
- Possible cognitive impairment
- Stroke
- Consequences related to IV use
- Legal problems

MECHANISM OF ACTION



PHARMACOLOGIC TREATMENTS FOR METHAMPHETAMINE USE OR: HOW I LEARNED TO STOP WORRYING AND LOVE BEHAVIORAL TREATMENTS INSTEAD

WHAT PHARMACOLOGIC TREATMENTS HAVE BEEN STUDIED

- Aripiprazole (Abilify)
  - Reduced motivation to administer methamphetamine in mice
  - Showed increase in reward and stimulatory effects of methamphetamine in human trials

- Modafinil
  - Shown to reduce methamphetamine relapse in rats exposed to conditioned cues to use
  - No double-blind, placebo controlled studies in humans have shown no effect on abstinence or cravings

WHAT PHARMACOLOGIC TREATMENTS HAVE BEEN STUDIED (CONT.)

- Mirtazapine
  - Shown to decrease expression of behavioral sensitization in rats
  - One study in the MSM population has shown a NNT of 3.1 for abstinence from methamphetamine
- Bupropion
  - Shown to reduce methamphetamine self-administration in rats
  - Mixed to poor results in human trials, however

WHAT PHARMACOLOGIC TREATMENTS HAVE BEEN STUDIED (CONT.)

- Methylphenidate
  - Did not show decrease in methamphetamine self-administration in rhesus monkeys
  - No effect seen on methamphetamine use in human trials, especially in patients with low amounts of use
- Baclofen
  - Reduced motivation for methamphetamine in rats
  - No effect seen in human trials
- Topiramate
  - Possibly lower use of methamphetamine seen in one human trial

WHAT PHARMACOLOGIC TREATMENTS HAVE BEEN STUDIED (CONT.)

- Varenicline
  - Shown in one phase I study to decrease some subjective ratings of “drug liking”
  - There are no phase II trials
- Rivastigmine
  - No effect was seen in self-administration of methamphetamine in phase I trials
- Perindopril
  - Decrease in physiologic changes related to methamphetamine in a phase I trial
  - No phase II trials have been done

WHAT PHARMACOLOGIC TREATMENTS HAVE BEEN STUDIED (CONT.)

- Dextroamphetamine
  - No benefit seen in abstinence from methamphetamine in multiple trials
- Naltrexone
  - No benefit seen in human trials
- NAC
  - No effect seen on cravings or use in human trials

SO WHAT ACTUALLY WORKS?

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CONTINGENCY MANAGEMENT

- Provides rewards for desired treatment goals and outcomes
- Has been shown to be effective across most drugs, but has also shown benefit in methamphetamine
- Shown to decrease use of methamphetamine and aid retention in treatment
  - Treatment effects seem to go away following post-treatment follow-up

RELAPSE PREVENTION

- Aims to limit or prevent relapse by helping to anticipate circumstances that may trigger a relapse
- Has been shown to have a significant decrease in methamphetamine use across several studies, however in follow-up, the effect is frequently lost

COGNITIVE BEHAVIORAL THERAPY

- Aims to teach, encourage, and support individuals about how to stop or reduce their substance use
  - Shown to be effective in decreasing self-reported methamphetamine use, with lasting effects seen in some trials up to a year after treatment
  - Also has shown to have a synergistic relationship when combined with contingency management

12-STEP PROGRAMS

- Stimulant Abuser Groups to Engage in 12-Step (STAGE-12) Trial
  - Mutual support programs, that can be directed to methamphetamine use
  - Somewhat mixed, but has shown good efficacy when combined with intensive outpatient treatment as compared to IOP on its own

MOTIVATIONAL INTERVIEWING

- Form of therapy that can be used to build motivation for change in behavior in patients
  - APA reports that there currently is insufficient evidence to solely rely on motivational interviewing as treatment, however, it should be part of a more comprehensive treatment

INTENSIVE OUTPATIENT

- Comprehensive treatment that uses elements of relapse prevention, family and group therapy, drug education, and 12-step participation
  - Has been shown to be effective at decreasing use of methamphetamine

WHAT LEVEL OF TREATMENT IS RECOMMENDED?

- Mild stimulant use disorder
  - 1st Line: Individual or Group Counseling with one of the methods above
  - 2nd Line: Partial or no-response after 3 weeks, transition to intensive outpatient therapy
  - 3rd Line: Partial or no-response after 8-12 weeks, augment with Contingency Management or CBT

WHAT LEVEL OF TREATMENT IS RECOMMENDED? (CONTINUED)

- Moderate to Severe Stimulant Use Disorder
  - 1st Line: Intensive Outpatient Therapy, which can be augmented with CBT or Contingency Management
  - 2rd Line: If inability to stabilize after 8-12 weeks of psychosocial treatments, should refer to addiction specialty provider for a trial of pharmacotherapy/higher level of care

SUMMARY OF OBJECTIVES

- Learn about epidemiology of methamphetamine
  - A synthetic stimulant that causes the release of and inhibits the re-uptake of dopamine
  - Relatively prevalent, with about a 2% lifetime prevalence of use
  - Can result in severe health consequences, with death being most likely from cardiovascular sequalae

SUMMARY OF OBJECTIVES

- Unsuccessful treatments for methamphetamine
  - No pharmacologic treatment has ever been successful in a phase II clinical trial
  - There is minimal evidence for replacement therapy with alternative stimulants
  - There is some poor or low quality evidence for mirtazapine

SUCCESSFUL TREATMENTS FOR METHAMPHETAMINE

- Psychosocial treatments are the standard of care
  - Contingency management, relapse prevention, CBT, motivational interviewing, and 12-step methods all can and should be utilized to the degree that the patient is willing to participate
  - Can also consider intensive outpatient, especially for patients with moderate to severe use disorders

THANKS, ANY QUESTIONS?

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