Treatment of Substance Induced Psychosis in the Primary Care Setting

with a Focus on Methamphetamine

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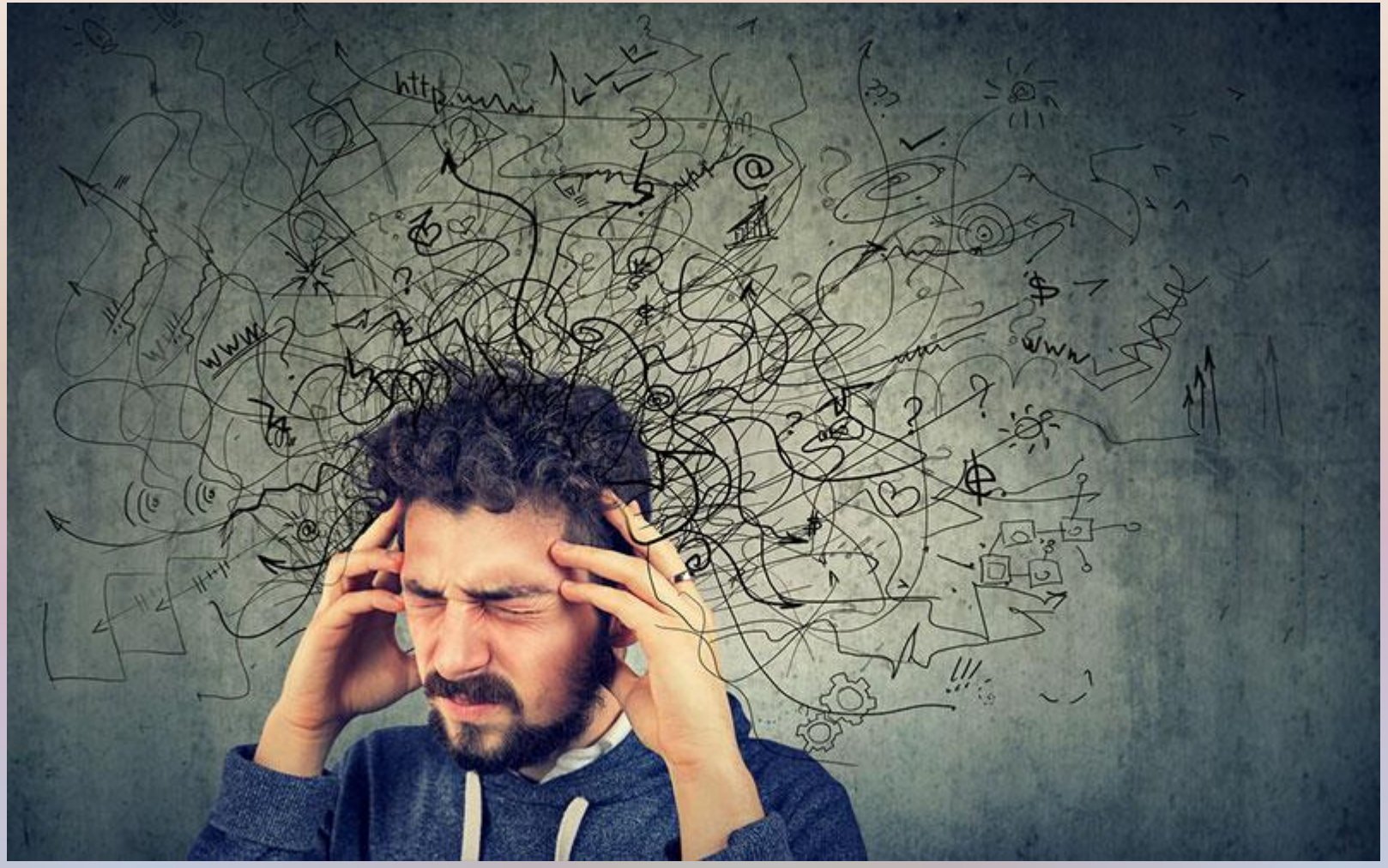
Overview

-Treatment of Psychosis (in general)

-Methamphetamine Induced Psychosis vs Schizophrenia

-Neurotoxicity of Methamphetamine (see my last ECHO lecture)

Treating Psychosis



Starting with the interesting stuff: Medications

- Aripiprazole 5mg daily
- Olanzapine 5mg at night
- Risperidone 2mg at night
- Haloperidol 2mg at night

Reasonable starting doses for psychosis

Weight Neutral

- Aripiprazole 5mg daily*
  - Akathisia (Restlessness)
  - Might increase drug use
  - Long halflife*
- Haloperidol 2mg at night
  - Parkinsonism
  - Might increase drug use

Weight Gain

- Olanzapine 5mg at night
  - Sedating
  - Well tolerated (aside from weight gain)
  - Lacks Long Acting Injectable
- Risperdal 2mg at night
  - Parkinsonism

Most antipsychotics are roughly equivalent in efficacy for acute psychosis

After Starting a Medication

- Try to follow up quickly (~1 week)

- Be willing to adjust medications
  - Defer to the patient
  - OK to switch medications
  - Some medication >>> No Medication
  - OK to halve or double any of the medications listed

After Starting a Medication

- You should see some improvement at follow up
  - If not, consider changing or increasing medication
- Complete recovery can take months (~6 months or more)
- Psychosis may resolve but Negative Symptoms may persist
  - Apathy, Impaired Decision Making, etc.

Should you wait for Psychiatry?

- I don’t think so, if it can be avoided
- Psychosis is dangerous
  - They can get hurt
  - They can hurt someone else
  - They can destroy their social functionality
    - Lose job
    - Lose relationship
    - Lose housing
- Psychosis is scary
    - Trauma Reactions

Literature Says Delays Affect Outcomes

- Psychosis can exist for years without detection (2 years on average- Larsen 1996)
- Outcomes improve with earlier treatment (Wyatt 1991)

Screening for Psychosis

- Have a conversation

Screening for Psychosis

- It is ok to ask direct questions
  - Auditory hallucinations?
  - Does the TV talk directly to you?
  - Is anyone following you or watching you?

Therapeutic Rapport

- **Rapport is THE Most Important Thing**
- All of the medication recommendations were low dose. Avoid side effects. Maximize benefit.
- Frequent meetings are better. Meetings with the same provider are better.
- Try to defer choices to the patient as much as possible.
- If they don't want an antipsychotic, help them with something else

Therapeutic Rapport

- DO NOT CONFRONT THEM (this includes the topic of drug use)
  - Affirming a delusion/hallucination is not going to make it worse
  - Psychosis is a lonely experience
  - Diagnosis may worsen outcomes (Calling Schizophrenia, “Schizophrenia”)

- **Rapport is THE Most Important Thing**

Therapeutic Rapport- L.E.A.P.

- Listen
  - "People are plotting to kill you?"
- Empathize
  - "Jeez, I'd be freaked out too if that was going on. That's really scary."
- Agree (find an aspect to agree on)
  - "I don't want you to feel unsafe either. Maybe we can find another way to protect you other than just relying on a knife."
- Partner
  - Don't rush to connect to treatment but find mutual goals and reaffirm them. The goal is to make them feel respected- not demoralized.

"We never win on the strength of our argument. We win on the strength of our relationship." –Javier Amador

Consider Emergency Detention

- Generally requires an acute danger to themselves or others
- Are they taking care of themselves?
- Consider obtaining collateral

They Get Better. Now What?

- Should antipsychotics be discontinued?

- We should discuss Substance Induced Psychosis vs Schizophrenia

Substance Induced Psychosis

- Psychosis can be caused by many substances
- Generally brief episodes
- Sometimes these episodes persist and transition to "Schizophrenia"
- Methamphetamine and Cannabis seem more problematic in 'precipitating' Schizophrenia than other drugs
  - ~15% of Methamphetamine users vs ~2% of Cocaine users

Psychosis in Methamphetamine Users

- Some degree of psychosis occurs in perhaps half of methamphetamine users
- Generally is limited to time immediately following use
- Persistent psychosis may occur in ~15% of patients
- Usually requires time to develop- usually over a year of use

Precipitating or Creating Schizophrenia?

- Controversial- both for Methamphetamine and Cannabis
- Individuals may be ‘born with’ Schizophrenia. Some do not develop clinically relevant symptoms. Hence ‘precipitation’.
- Kendler 2019: Epidemiologic risk factors for those with Schizophrenia and those with Methamphetamine Induced Schizophrenia were identical.
- Imaging, such as PET-CT and MRI are nearly identical between individuals with Schizophrenia vs persistent Substance Induced Psychosis

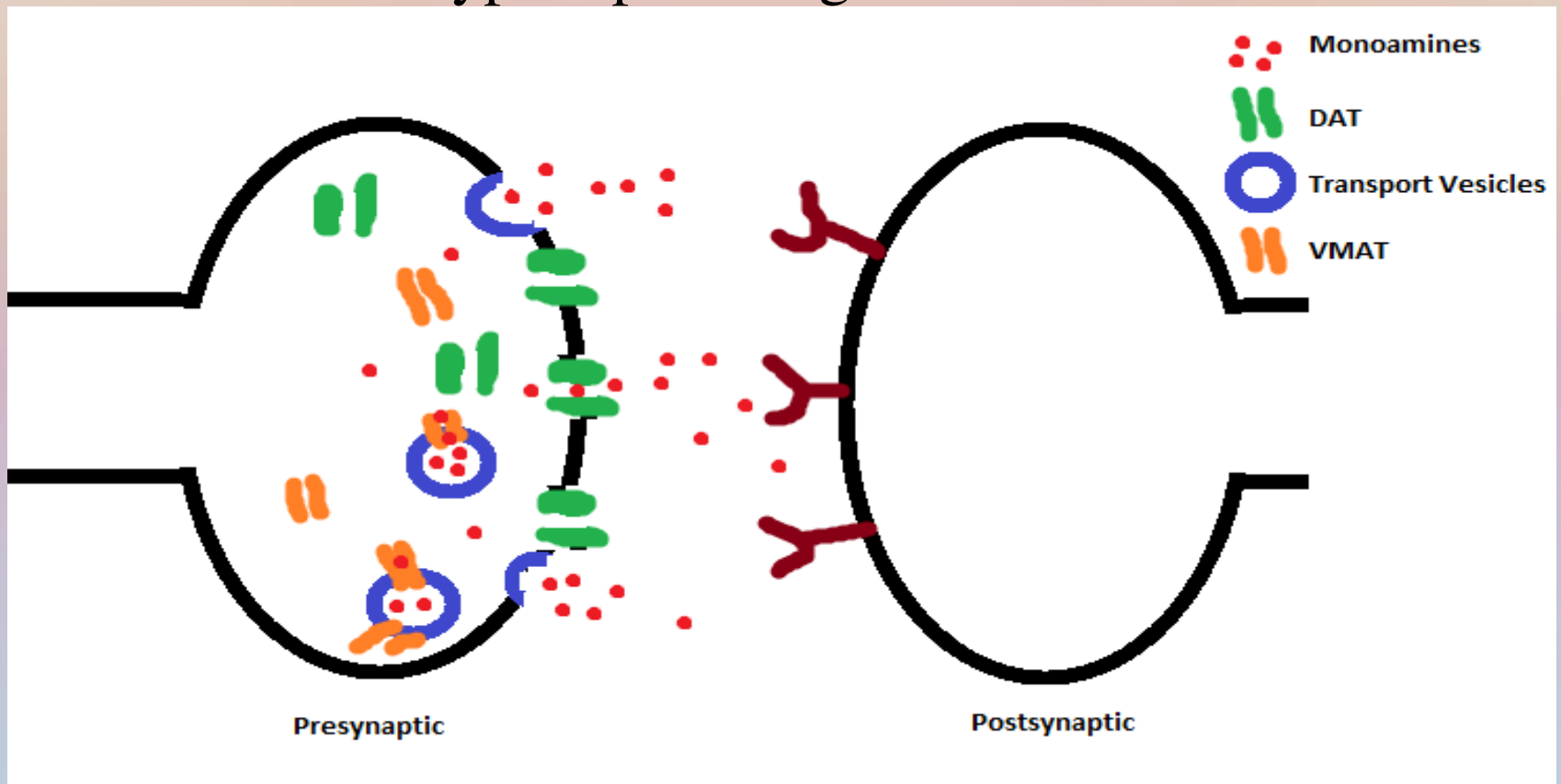
Regular Methamphetamine Users

- Regular Methamphetamine users without psychosis have cognitive abnormalities that mirror Schizophrenia but are milder
  - Executive function, working memory, memory, social cognition, amotivation, anhedonia
- Methamphetamine use creates a (chronic) hypodopaminergic state that mirrors part of what is seen in Schizophrenia
  - Used as one of the animal models for schizophrenia

Mechanisms of Injury

(Amphetamines: Trace Amine Associated Receptor Agonists)

- DAT and VMAT get turned off and stay off.
- Cells make much less dopamine
- Results in chronic hypodopaminergic state



Should we stop antipsychotics?

- Persistent Substance Induced Psychosis and Schizophrenia might be the same thing- or at least indistinguishable
- Many studies tend to look instead at “First Episode Psychosis”
- First Episode Psychosis studies lean towards continuance of antipsychotics
- Most guidelines recommend continuance of antipsychotics for at least 1 year
- If multiple episodes occur, I would lean towards continuance of antipsychotics indefinitely

Side Effects

- Metabolic effects
  - Much higher cardiovascular risk in individuals with SPMI- possibly multifactorial
- Parkinsonism, including Akathisia
- Hyperprolactinemia
- Sedation

Antipsychotics Should Be Tapered

- Rapid discontinuation of antipsychotics is known to precipitate psychosis
- Always taper if possible

Long Acting Injectable Antipsychotics

- Can be a very useful tool

Amphetamine may be riskier than Methylphenidate

- 15% of Methamphetamine Users vs 2% of Cocaine Users develop persistent psychosis
- Moran 2019: 50% higher risk of psychosis in individuals treated with Amphetamine vs Methylphenidate for ADHD
- Baumeister 2021/Curtin 2014: Reason to suspect Amphetamine use increases risk of Parkinson's Disease
- Methylphenidate and Cocaine are reuptake inhibitors. Amphetamine/Methamphetamine are not (TAAR-1 agonists)

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