Methamphetamine and Psychosis
Methamphetamine Induced Psychosis

• First reported case made in 1938 (Benzedrine)
  - at that time felt that amphetamines were safe and these cases represented latent schizophrenia

• 1958 – case series by Connell that clearly documented transient nature of the psychosis and directly linked the psychosis to the drug use

• 1968 - direct administration of amphetamine to 9 human subjects, 6 of the 9 developed “blatantly paranoid symptoms”

• 1973- direct infusion of methamphetamine (55-640mg) delivered for 75 minutes induced a psychotic reaction in 12 of 14 patients
• DSM-V
• An episode of psychosis that occurs in the context of MA can be considered a primary psychotic disorder under the following conditions
  - symptoms are substantially in excess of what would be expected given the type or amount of substance used or duration of use
  - there is a history of psychotic episodes that are not substance related
  - psychosis symptoms onset preceded the onset of substance use
  - psychotic symptoms persist for at least one month after the cessation of intoxication
Duration of MA psychosis

• Average recovery period of 1 week
• 16 and 17% of MA users continue to experience psychosis after 1 to 2 months of abstinence
• Even if the psychotic symptoms produced by methamphetamine are transient recurrent drug use leads to a symptom course that appears chronic in nature in some individuals
• 19-30% of people who are diagnosed initially with an amphetamine–related psychosis are subsequently re-diagnosed with a chronic psychotic disorder within 10 years
Methamphetamine Associated Psychosis

• 2 subtypes of psychosis
  - transient (>50%) < 1 week
    - hallucinations tend to be persecutory delusions, tactile hallucinations (formication)
  - persistent: 4 weeks (26%)- 3 months (16%)
    - nonpersecutory delusions, delusions of reference*, thought interference and auditory hallucinations (similar to primary psychosis)
  - Neurocognitive deficits (impairment of verbal memory, fluency, attention, processing speed and executive function)

*is the false belief that irrelevant occurrences or details in the world relate directly to oneself
Methamphetamine Associated Psychosis

Fig. 1
MAP spectrum
Methamphetamine and Psychosis

• 26-46% of methamphetamine users

RISK FACTORS
• Chronicity of use and regular use
• Individuals with schizophrenia, schizoaffective disorder and schizotypal personality disorder
• Other psychiatric comorbidities
  - affective disorders
  - antisocial disorders
• Smoking (1.7 yrs) > injection (4.4 yrs)
• Hx of childhood trauma (4.5 x in those with 3 types of trauma)
• Sleep deprivation?
• Family history of schizophrenia or bipolar (5X risk)-gentic risk (DTNBP gene)
• Recurrence is common, sensitization or reverse tolerance
Methamphetamine induced Psychotic Disorder?

• Careful assessment of the temporal relationship of substance use and the onset of psychosis
  
  often difficult if not sufficient periods of abstinence, poor histories
  - use collateral sources (family, medical records, uds testing)

• Whether induced or “associated” primary goal is to stop the simulant use

• The use of antipsychotics
Acute Interventions

- Haloperidol/Lorazepam IM
- Droperidol IV
- Ziprasidone IM
- Olanzapine IM
Observation

- Patients often clear within days
- Paranoia/psychosis may be manageable without medications
- Symptoms can be severe and not improve with abstinence
Continued Psychosis in Need of Intervention

• Antipsychotics are effective
• Would consider customary use of familiar antipsychotics
• Due to insurance coverage, range of dosing and the option of a quick long-acting injection we often use risperidone.
• Would not consider a “diagnosis” of Schizophrenia or Rx for an antipsychotic an exclusion for treatment programs.
How Long to Treat

• Reasonable to consider a monthly time frame for evaluation of symptoms and side effects
• Recommend tapering of dose
• Even without use of methamphetamine psychosis may return and warrant intervention.
References

Methamphetamine psychosis; insights from the past. McKeiten, Addiction 113, issue 8, 2018
