

# 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

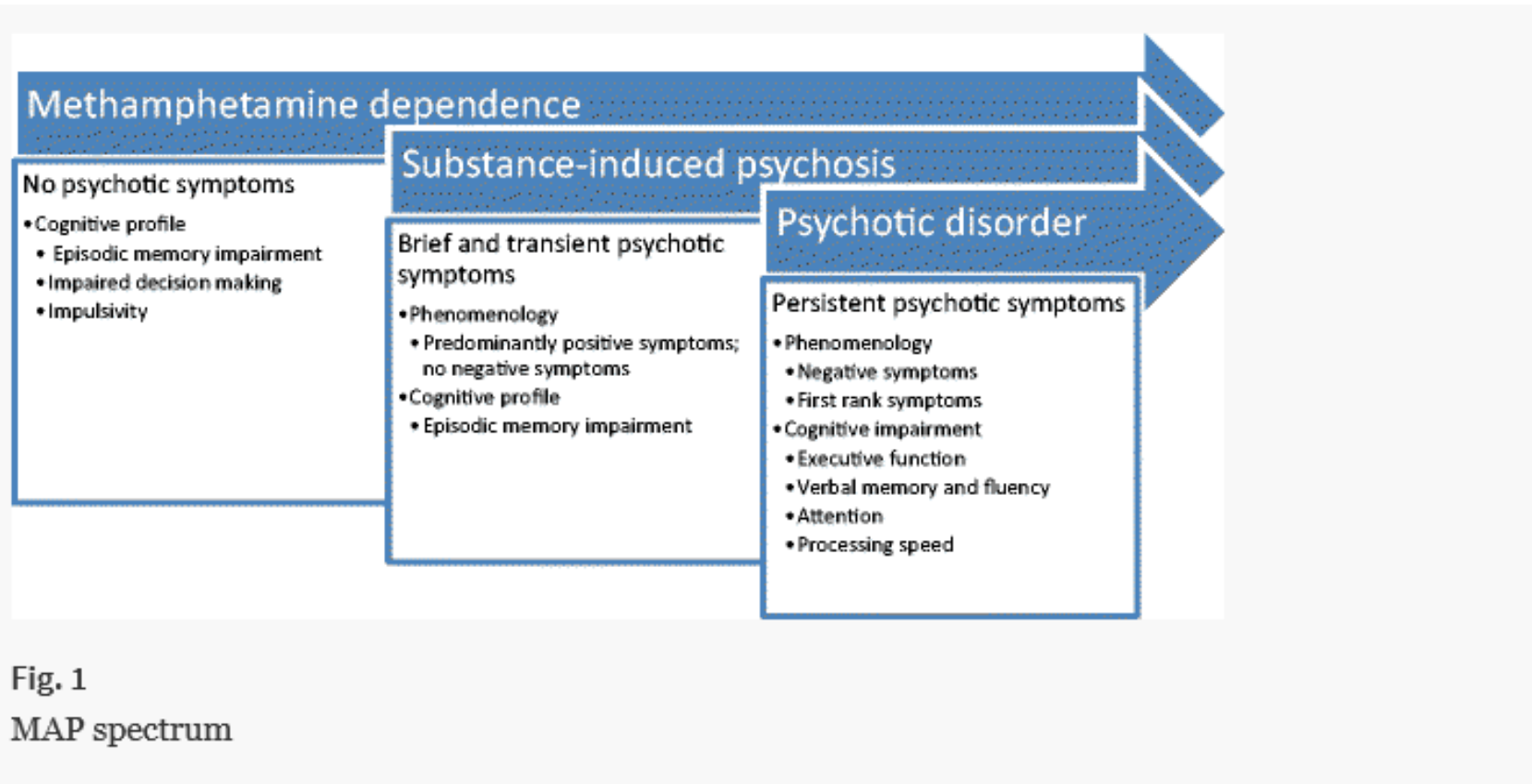
- Average recovery period of 1 week
- 16 and 17% of MA users continue to experience psychosis after 1 to 2 months of abstinence
- Even if the psychotic symptoms produced by methamphetamine are transient recurrent drug use leads to a symptom course that appears chronic in nature in some individuals
- 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 :4weeks (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



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- 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)-genetic 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

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