

Addiction Summit 2018- Methamphetamine Cured my Cocaine Addiction - Colin N. Hail- Baylor College of Medicine

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Abstract

Three methamphetamine-dependent participants that had been in our clinical laboratory experiments and previously obsessed on cocaine are reviewed.

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Introduction:

Cocaine increases central catecholamines that are linked to its positive subjective and reinforcing effects. Drugs with similar pharmacological action to it of cocaine like d-amphetamine (AMPH) and medically formulated methamphetamine (METH) administered chronically produce tolerance to its reinforcing effects and should be useful in treating cocaine dependence. Accordingly, recent clinical studies show that AMPH attenuates cocaine's positive subjective effects and that treatment with sustained-release METH reduces rates of cocaine positive urine and decreases craving for cocaine in cocaine-dependent individuals. Consistent with these studies, we review three unique case histories of METH-dependent participants previously obsessed on cocaine who abruptly stopped once they started using METH. In essence, they stated that METH "cured" them of their drug addiction.

Materials and Methods:

A detailed demographic and drug use history was obtained during a basic screening interview for admission into one of our clinical laboratory trials. Participants tested positive for METH on initial screening yet none demonstrated overt clinical signs of METH intoxication. Participant primary and secondary screens were reviewed. Inquiry was aimed at why they thought METH may have helped them and what new adverse consequences they may have experienced by abusing another highly addictive substance.

Results:

Participant 1 (P1):

P1 was a 40 year-old male Caucasian of Philippine descent who used cocaine and alcohol heavily before 2005. By his own estimation he was "severely" obsessed to cocaine and

alcohol. Addiction to these substances directly contributed to numerous adverse interactions with law enforcement and irreparable harm in relations with his family and friends.. He described cocaine because the "ultimate evil" that brought out the "hater" in him. Depression, suicidal ideation, financial stress and threats of violence from cocaine dealers forced him to leave his home. Soon after he moved to Houston, he was given METH at a party and felt it had "benefitted his being".. He stated emphatically that he had not used, nor had any searching for cocaine or alcohol, since first starting METH even when given the chance to use these substances. During screening, he reported that he used METH 25 days out of the 30 before to the interview and no cocaine or alcohol for 4 years. Similar to consequences he suffered when abusing cocaine, he continued to own financial and legal problems associated with his heavy METH intake. In contrast to his past cocaine and drug abuse, METH had no effects on his daily nicotine (1 pack per day) and cannabis (2 joints per day) use. In fact, P1 indicated that cannabis, but not nicotine, increased both the 'high' and 'desire' associated with using METH.

Participant 2 (P2):

P2 was a 40 year old, Caucasian male musician who had some success touring and recording with various popular bands in the 1980s and 1990s. According to P2, METH allowed him to be more productive even though he felt he rarely finished any projects he initiated. His last gainful employment was in 2009 teaching guitar lessons which he left likely due to paranoia secondary to METH. Similarly, P2 stated that the reason he left his last band was because the leader: "kept giving me that evil eye, ya know, when they look at you like that, it's a bad sign." P2's responses on multiple drug, use questionnaire indicated that cannabis reduced the 'high' associated with METH and decreased 'desire' for the drug whereas nicotine had not effect.

Participant 3 (P3):

P3 was a 30 year old Hispanic male, who had been using METH for 7 years. Similar to the participants reviewed above, P3 enjoyed METH's cognitive effects and felt he was more productive yet he always needed money to support his large METH intake (approximately 1 gram per day). He was inconsistently employed and held numerous jobs often

circumventing resources from them clandestinely. He also stated that METH enhanced his sexual performance, which was important to him since he worked in pornography.

Discussion:

These cases appear to support preclinical and clinical studies suggesting that chronic treatment with AMPH-like stimulants—such as METH—may be efficacious for cocaine dependence. Interestingly, each participant's searching for cocaine was abolished once they began using METH. This could suggest that they are likely replacing one addictive substance for another similar to methadone maintenance therapy for opioid dependence. Still, once they started using METH, their searching for cocaine was abolished. This anecdote is according to recent controlled clinical studies showing that chronic treatment with AMPH blocks cocaine's positive subjective effects and sustained-release formulations of METH decrease cocaine use in humans. AMPH and METH are not viable treatments for cocaine dependence due to high abuse liability and obvious adverse social, financial and psychiatric consequences associated with use of these stimulants as demonstrated by the cases described above. Medications used to treat attention deficit hyperactivity disorder in children and adolescents in sustained – release formulations may be a better option. Also, stimulant pro-drugs like lisdexamfetaminedimesylate that's activated only after its metabolized may offer a viable option since their inherent slow onset of action and entry into the CNS reduces abuse liability. Our research group is currently planning laboratory studies assessing stimulant pro-drugs as potential medications for cocaine dependence.

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