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A female teenager with methamphetamine dependence and antisocial behaviors following childhood major depressive disorder: A case report

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A Thai law for drug addict rehabilitation has been in force for almost 10 years. In 2000, Thailand and China accounted for over 70% of global MA seizures and over 100,000 individuals received treatment for MA dependency treatment each year in Thailand. Reported here is a case of female teenager who had a history of major depressive disorder and, according to the law, was hospitalized for methamphetamine dependency treatment. The patient was engaged in a number of antisocial behaviors before admission, including running away from home, starting fights with friends, lying, and using illegal substance. A physical and mental status examination showed no striking abnormalities. After four months of hospitalization where the patient went through a drug treatment program without any medication she was declared drug-free and released from the hospital. Close outpatient monitoring is mandatory to prevent relapse.

Keywords : *Methamphetamine, depressive, antisocial, rehabilitation.*

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รัศมน กัลยาศิริ, วุฒิชัย หาสุข, จิตติมา พฤฒิพฤกษ์. วัยรุ่นหญิงติดสารเมทแอมเฟตามีนและมีพฤติกรรมอันธพาลตามหลังโรคซึมเศร้าในวัยเด็ก: รายงานผู้ป่วย 1 ราย. จุฬาลงกรณ์เวชสาร 2555 มี.ค. – เม.ย.; 56(2): 211 – 8

พระราชบัญญัติฟื้นฟูสมรรถภาพผู้ติดยาเสพติด พ.ศ.2545 มีผลบังคับใช้มาเกือบสิบปี รายงานนี้เป็นกรณีของวัยรุ่นหญิงที่มีประวัติเป็นโรคซึมเศร้า และถูกบังคับบำบัดให้พักรักษาตัวในโรงพยาบาลตามกฎหมายฉบับนี้เพื่อบำบัดการติดสารเมทแอมเฟตามีนหรือยาบ้า ผู้ป่วยมีพฤติกรรมเกี่ยวข้องกับแบบอันธพาลก่อนเข้ารับการบำบัด เช่น หนีออกจากบ้าน ก่อเหตุทะเลาะกับเพื่อนโกหกบ่อยครั้ง และใช้สารเสพติดผิดกฎหมาย จากการตรวจร่างกายและสภาพจิตไม่พบความผิดปกติใดอย่างชัดเจน ผู้ป่วยรับการรักษาในโรงพยาบาลนานสี่เดือน โดยผ่านโปรแกรมการบำบัดสารเสพติดโดยไม่ใช้ยา เธอตรวจไม่พบการใช้สารเสพติดอีกต่อไปและจำหน่ายออกจากโรงพยาบาล อย่างไรก็ตาม การตรวจติดตามอย่างใกล้ชิดเป็นสิ่งที่ต้องกระทำเพื่อป้องกันการกลับไปใช้สารซ้ำ

คำสำคัญ : *ยาบ้า, ซึมเศร้า, อันธพาล, ฟื้นฟู.*

Methamphetamine (MA) dependence is a major health problem and social concern. [1-3] The etiology of MA or other substance dependence is complex: it affects the brain circuits and may involve genetic factors [4] in addition to psychological factors (i.e., comorbidity or dual diagnosis), and the environment (i.e., availability). The etiology of MA dependence is still obscure and needs new investigative approaches. Therefore, finding effective treatments and public policies for MA dependence is a challenge. [4] In 2000, Thailand and China accounted for over 70% of global MA seizures. [2] In 2002, the Thai government issued a law concerning drug rehabilitation. As a result, a number of MA abusers have participated in substance treatment programs available nationwide. We report here an example of a female teenager with a history of major depressive episodes. The patient was later arrested because of MA use, and was subsequently required by the authorities to undergo MA dependency treatment.

Case Report

An 18-year-old, 155-cm-tall, 52-kg Thai female, who never had a job since she quit school at Mathayom 5 (grade 11) had been using MA or *ya-ba* for 3 years. She was arrested by the police and spent 6 weeks in jail due to MA use. Subsequently, she was sent to a treatment center by the authorities for compulsory rehabilitation. She had also used other substances a few times, including alcohol (1 drink in her lifetime), ice (3 times at 16 years old), cannabis (4 times at 17 years old), and tobacco (10 times just when she was in jail).

She was first introduced to MA by friends after she ran away from home at the age of 18 (see below); it subsequently became her drug of choice. She imagined that MA was a magical drug that solved all her problems in life. During the first year of use, she usually inhaled the smoke of MA for 15 days per month (2 times a day) and increased the frequency of use to 20 days per month (2 times a day) during the second year, then 25 days per month (8 times a day) during the third and fourth years of her drug abuse. However, she abstained from MA during the period of her pregnancy at age of 17. In total, she has used MA ~ 2,300 times, including 800 times during the last 12 months and spent ~200,000 baht on buying the substance. In addition, MA was supplied to her by her friends and boyfriend. She reported that she felt sleepy and easily irritated when she was not using MA. When under the influence of MA, she became garrulous and easily angry. She hurt her boyfriend or destroyed household items either by throwing or burning them several times under the influence of MA. She also exhibited repetitive behaviors pulling out her hair or cutting her nails until they bled when she was under the drug influence. At 17, she took 30 tablets of paracetamol without having the intention to kill herself, but to get her boyfriend's attention when he came home late. She was under the influence of MA when she had overdosed paracetamol.

After using MA for a year, one day she began to believe, incorrectly, that the person riding on a motorcycle behind her was an on-duty policeman who was attempting to arrest her. This delusion occurred because she was under the influence of MA and because the feeling was so strong, she sped away on her motorcycle to escape her presumed pursuer. Before this event, she had been taking eight pills of MA for 3 consecutive days during which time she felt

under its influence all the time. The feeling that a police officer was chasing her lasted for half an hour.

After the first episode of delusion, she generally experienced similar episodes for 30 minutes repeatedly when she took three MA pills or more per day. She believed that such a feeling resulted from sleep deprivation rather than an increased MA intake. The presence of other people had no effect on the delusion when she was under the influence of MA. Nevertheless, she was more likely to believe that a police officer was chasing her when she used MA in new settings. She mentioned that the experience of this delusion, despite knowing later that it was not true, made her feel uncomfortable. In addition, when under the influence of MA she often thought that her friends and boyfriend were gossiping about her when saw them talking. She yelled at her friends and aggressively kicked her boyfriend because of this false belief. She understood later, after recovery from MA, that the thought was not true.

She experienced other delusions while using MA: hearing footsteps or a voice calling her name despite the fact that no one was present; screaming as she thought a ghost was approaching her face; and, seeing recurring images of her boyfriend having motorcycle accidents. These experiences occurred when she asked her boyfriend to get MA for her and he came back unexpectedly late.

Case background

Before the age of 6, the patient had a normal life as a child in a typical family. However, her life began to change when her father became an MA addict and a drug seller. He had no money for her or her mother as everything was spent on drugs. Her father also cheated on her mother and beat the child. Her parents divorced when the patient was 7 and, despite knowing her father's history, she chose to live with him because he had more money than her mother.

However, her father and his new family physically abused her. She reported experiencing depression most of the time when she stayed with her father's new family. She cried every day and could not recall any happy moment during that time. She lost weight and had trouble falling asleep. Sometimes she woke up during the night and cried herself to sleep. People around her said that she talked or moved more slowly than before. She lost energy and thought that she was worthless to her father's family. Her thoughts were slower and she had difficulty concentrating on what her teachers taught her in class. She also considered committing suicide by hanging a number of times. She experienced feeling sadness almost every day for a year until her mother eventually took her back.

After moving back to live with her mother, they changed domiciles four times before settling down when the patient was 12-year-old. Unfortunately, the patient faced student bullying at her new school but she felt that the experience made her stronger later in life. At the age of 14, she began hurting people on purpose, telling lies, cheating on her boyfriends, and running away from home. On one occasion, a friend humiliated her by telling a lie about her to others. As a result, she hurt the friend by kicking and slapping her face, then throwing her into water and cutting her hair. Subsequently, the incident caused her to run away from home as she was afraid that she would be jailed on assault charges. In addition, she had been

engaging in sex since she was 14 and had had sexual relations with thirteen different men. She saw herself as a person who often ignored the feelings of others. None of the above behaviors surfaced before the age of 13.

The timeline of her use of MA and other drugs, her behavior, and subsequent depression are shown below in Figure 1.

At the interview, no sign of depression, anxiety, or psychotic symptoms (i.e., delusion, hallucination, disorganized thoughts or behaviors, negative symptoms) were observed. She fully cooperated by participating in the interview. No needle marks or evidence of other kinds of marks or scars were noticed on her body, while vital signs and a physical examination were normal. Urine toxicology for methamphetamines was negative.

During hospitalization, the patient received no medication, but attended a regular program: the FAST model (Family, Alternative, Self, Treatment), for MA dependence treatment which was developed by the Center for Therapeutic Community model (TC model). She was hospitalized for four months until the completion of the program. Then she was released from the treatment center.

Discussion

The patient is a female MA-user with symptoms of compulsive MA use that met the Diagnostic and Statistical Manual of Mental Disorders -(fourth edition DSM-IV) criteria for MA dependence [5] who was sent by legal authorities to receive compulsory rehabilitation. She displayed four symptoms out of seven criteria (at least three symptoms are needed) for methamphetamine dependence diagnosis including 1) needing larger amounts of MA to get the same effect; 2) experiencing withdrawal symptoms; 3) spending a great deal of time using MA; and, 4) giving up or greatly reducing important activities in order to use MA. All of the above symptoms occurred within a 12-month period and lasted for three years.

The patient had paranoid delusions, an irrational conviction that someone or something was personally threatening her [6, 7] (i.e., belief that a policeman was chasing the patient) and delusions of reference (i.e., her husband and friends were gossiping about her) which occurred only when she was under the influence of MA. The patient's delusions were self-limited and consistent with most MA-induced paranoia (MIP) that usually disappears in less than

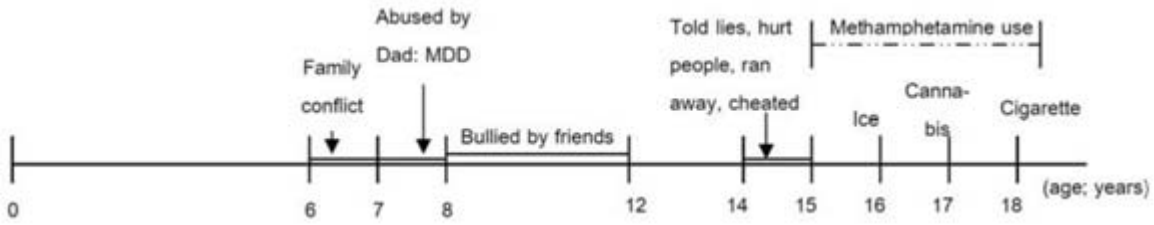

Figure 1. The timeline of childhood stressful events, subsequent depression, use of methamphetamine and other drugs, and conduct behaviors of the case are shown respectively.

24 hours after use.[8] MIP occurs in 40-60% of MA-dependent individuals [9 - 11] and was dose-/severity-dependent.[9] Substance-induced paranoia (i.e., the effect of cocaine) might be attenuated by consumption of substance in a safe setting. [12] However, paranoia might be aggravated by a new surroundings [13], which is consistent with the patient's report of increasing MIP experience when she used MA in an unfamiliar place. She also had a few episodes of MA-induced auditory and visual hallucinatory experiences. These hallucinatory experiences are common (60%) in MA-users [10] who also have a high rate of committing assaults when they were under the influence of MA.[14] The cause of MIP is currently unknown and the MIP phenotype is one of the models to investigate for the cause of primary psychotic disorders (i.e., schizophrenia). Genetic and environmental factors are thought to play an important role in the occurrence of the trait or related-phenotype. This patient has a family history of MA dependence.

The patient's behavioral change started at age 14, which was before the onset of MA use. She told lies, physically hurt people, ran away from home, used illegal substances, had sexual experiences with a number of people, was unfaithful, and ignored other's feelings. Although these behaviors were not the results of substance intake since a temporal relationship was lacking, neither did the behaviors meet the DSM-IV criteria for conduct disorder and/or antisocial personality disorder due to the lack of early behavioral onset (e.g., before 13-year-old). Thus, these conduct behaviors might be a part of other psychiatric disorders. She had depressive symptoms that warranted a diagnosis of a major depressive episode after the age of 7 when she had been physically abused by her father. Recurrent episodes of depression or occurrences of mania were possible. When a normal teenager, seemingly without reason, engages in an unusual activity such as truancy, alcohol abuse, and/or sexual promiscuity, he/she might be experiencing a depressive equivalent.[15] Despite the mood disorder lacking an episodic nature, a chronic mood disorder (i.e., dysthymia) might not be excluded.

Unlike alcohol, opiates, and nicotine, no medication has been approved to treat MA dependence yet. However, off-label medication (i.e., specific serotonin reuptake inhibitor) is currently used in Thailand to hypothetically reduce MA craving and/or to treat patient's dual diagnoses (i.e., depressive/anxiety disorders). However, this patient received no medication for MA addiction but was symptoms-free and getting better by receiving a long-term hospitalization that provided a psychosocial treatment program developed by the Center.

In summary, the patient is a female teenager who presented with MA dependence and childhood major depressive disorder. She came from a divorced family and with a history of physical abuse that might have predisposed her to become depressed later in life, and might have drawn her to the use of illegal substances. By law, she was ordered to be hospitalized for compulsory treatment of illegal-substance dependence. In general, MA abusers who receive dependency treatment by court order are 'less' severely abused MA than those who were treatment-seeking (i.e., entered into treatment voluntarily).[16] Therefore, the patient might have a good prognosis in terms of having less severely

abused drugs (compared to others that might have sought help due to severe use). However, having a co-morbid, major psychiatric disorder, a family history of MA dependence, a history of physical abuse, a lack of social support, and no employment, or involuntarily undergoing the treatment (i.e., showing lack of self motivation) are among factors contributing to the patients susceptibility to relapse. Close follow-up monitoring for relapse is thus warranted for this patient.

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