

CASE REPORT

Morgellon's Disease Due to Methamphetamine Use: A Case Report

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Abstract

Methamphetamine (METH) is a psychostimulant drug that has become widely used worldwide in recent years. Various serious side effects have been reported in the literature depending on its use. In this case report, a 35-year-old male patient who applied to the dermatology outpatient clinic with skin lesions and was diagnosed with Morgellon's disease due to methamphetamine use in the follow-up is presented in the light of the literature. We emphasize that clinicians should be more vigilant about the use of METH and its side effects and that more research is needed on the subject.

Keywords: Methamphetamine, Side Effects, Substance Use, Addiction, Morgellon's Disease

INTRODUCTION

Methamphetamine (METH) is chemically closely related to amphetamine. It is a substance with greater potential for harm due to its stronger effect and longer half-life. It is reported that approximately 37 million people worldwide are METH users and its use is increasing gradually. METH use disorder is a global problem and a major public health concern (1). Short or long-term use of METH causes circulatory, respiratory and neurological problems, as well as mental health problems ranging from anxiety, aggression and depression to acute paranoid psychosis. Although serious side effects in METH users have been reported, cutaneous side effects are rare in the medical literature (2, 3). Delusional parasitosis is a rare disease in which a person is falsely and persistently believed to be infected by parasites or small living creatures (4). Morgellon's disease is a rare disorder in which patients report somatic complaints of

fiber-like, hard materials in their skin and skin lesions are observed. Thomas Browne first described this disease in the late 17th century (5). Although the criteria for the disease are not clearly defined, many researchers suggest that the disease is a subtype of delusional parasitosis (6). In this paper, we will present a case of Morgellon's disease due to the use of METH, which has not been previously reported in the literature.

CASE

A 35-year-old, single, secondary school graduate, mechanical worker, male patient applied to the dermatology outpatient clinic with itchy, aching and reddened lesions on his skin for about 6 months. The patient stated that he thought that there were hard objects such as iron wire under his skin, and that he

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occasionally injured his skin to remove these objects from his skin. The patient was referred to us after the examinations performed in the dermatology outpatient clinic. The patient stated that there were hard objects under the skin, stinging, itching, and biting sensations. He stated that when he scraped the wounds with his nails, red insects appeared. The patient once said that by burning the lesion on his skin with a lighter, red insects came out of it. In the mental state examination of the patient who did not have a previous psychiatric diagnosis and treatment history; he was consciously oriented and cooperative, his self-care was decreased, he was making eye contact, he was responding to the questions about the interview purposefully, his speech amount and speed were normal, his mood was depressed, his affect was depressed and anxious, he had visual and tactile hallucinations in perception. He had been using METH 3-4 times a week for the last 8 months. He has been using METH every day for the last 1 month. In the physical examination, a large number of erythematous lesions were detected on the anterior surfaces of the forearm and upper leg, the largest of which was 6×8 mm in diameter and the smallest was 2×3 mm in diameter. As a result of the psychometric tests, he got 82 points

from the Barratt Impulsivity Scale, 26 points from the Positive Symptoms Assessment Scale, 17 points from the Negative Symptoms Assessment Scale, and 20 points from the Hamilton Depression Assessment Scale. In the Minnesota Multidimensional Personality Inventory, he was expressed as a borderline individual with impaired ego functioning, unwilling to establish relationships, severe neurotic disorder, unusual and unconventional thinking, antisocial and rebellious. His vital signs were within the normal range of fever, blood pressure, and pulse. No pathological finding was detected in the routine hemogram and biochemical tests of the patient. METH was positive in the psychoactive substance screening in the urine. The patient was diagnosed with Morgellon's disease due to METH use. Antidepressant and antipsychotic drug combination was preferred in the treatment of the patient's depressive mood and psychotic symptoms due to METH use. The patient was started on sertraline 50 mg/day and risperidone 2 mg/day treatment. After 12 weeks of treatment, a significant decrease was observed in the patient's existing psychotic symptoms and skin lesions. Written consent of the patient was obtained for publishing a scientific article and sharing the photographs of his skin lesions.



Figure 1. Erythematous lesions on the patient's skin on the anterior surfaces of the forearm and upper leg

DISCUSSION

First synthesized in Japan in the 19th century, METH gained popularity during World War II among soldiers who were given METH or amphetamines to keep them awake for extended periods of time. METH has become widely available in the post-war period for the treatment of many diseases such as narcolepsy, depression, obesity, alcohol dependence, and attention deficit hyperactivity

disorder Short-term effects of METH include euphoria, alertness, increased confidence, hyperactivity, and loss of appetite (7). Some of the adverse consequences include neurological and psychiatric complications, cardiovascular problems, pulmonary arterial hypertension, periodontal disease, and renal failure. Specific METH-induced neurological and psychiatric effects include cerebral stroke, seizures, schizophrenia, and psychotic illness Dopamine release is responsible for the euphoric effects of METH,

but long-term use of METH causes molecular changes in the dopamine system and nerve ending damage in the brain. This leads to psychotic disorders, hallucinations, delusions, and depression (8). METH has become the second most widely used class of illicit drugs worldwide (8). The use of METH is most common in individuals in their 20s and 30s. It is estimated that 6-46% of METH users develop METH-related psychosis, characterized by persecutory delusions, auditory and visual hallucinations (9). There are case reports of delusional parasitosis due to METH use in the literature (10). In our case, visual and tactile hallucinations and depressive symptoms were observed after the use of METH. In general, the psychotic state can be resolved with dopamine receptor antagonists (11). We preferred sertraline and risperidone agents in the treatment of the case. Significant improvement in the patient's symptoms was observed.

CONCLUSION

METH use has many adverse effects on patients. These negative effects are encountered by clinicians with various symptoms. All clinical branches should pay attention to the prevalence and adverse effects of METH use. The most important feature of our case is Morgellon's disease, which was the first to be reported in the literature due to the use of METH.

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