

## Case Report

## Self-Injury Due to Methamphetamine Psychosis: A Case Report

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**Objectives:** Rapid and fast growth of Methamphetamine in Iran has posed a new challenge for Iranian health sector. The objective of this study was to report a case of Methamphetamine psychosis.

**Methods:** The patient was an 48-year-old married male who complained of suspiciousness and delusion of control, he started using Methamphetamine 5 years ago, Two days after hospitalization and before drugs taking effect, he took a spoon during a meal, broke it in half and stabbed into his right temple, in an attempt to take out the imaginary device implanted in his head controlling him.

**Results:** It was revealed that the patient is weak at social interactions and is under peer pressure and that he cannot withstand the pressure. Therefore, strategies of improving social skills for establishment of social relationships and interactions as well as assertive training were considered for him. The patient underwent an emergency surgery and during which the object entered his brain was removed.

**Discussion:** Methamphetamine psychosis may respond well to combination behavior therapy and rehabilitation programs and pharmacotherapy medications.

**Keywords:** Methamphetamine, psychosis, Self-injury

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### Introduction

Methamphetamine is the second illegal substance used second to Cannabis in north America, Asia and Oceania (1). Rapid and fast growth of Methamphetamine in Iran has posed a new challenge for Iranian health sector (2). In the past 5 years and with the domestic production of Methamphetamine, its price has reduced to less than one-fifth of its previous price (3). current unofficial estimates suggest that Methamphetamine is currently 2nd or 3rd most widely used illegal substance in Iran (3). In addition, so any patients who try to keep away from opioids, turn to Methamphetamine as a substitute, assuming it to be a "Non-addictive" substance (3). addiction is a malicious social phenomenon with widespread psychological, familial and economic adversities which contribute to theft, murder, suicide, violence and divorce (4). Methamphetamine associated psychosis (MAP) has been frequently reported in Iran in recent years (2). Methamphetamine is known as a synthetic derivative of amphetamine, however, due to addition of a methyl group to its chemical structure, it has

gained lipid solubility property which allows a more rapid transport of the drug across blood brain barrier (2). The presence of MAP is generally transient and normally diminishes after a few days, however susceptibility to psychotic episode could be prolonged for years after keeping away from using Methamphetamine (2). Omidvar and sharifi, have examined a patient who has been diagnosed with MAP and auto-nucleation. The patient in their study has been delusional of being controlled and believed that another person was using his eyes (5). In another study, the clinical records of 111 Methamphetamine patients who had been admitted to a central hospital in Tehran during the period of April 2008 to April 2010 were reviewed. The finding of this study have shown that among the most prevalent psychotic symptoms persecutory delusions (82%), auditory hallucination (70.3%), reference delusion (57.7%), visual hallucination (44.1%), grandiosity delusion (39.6%), jealousy delusion (26.1%) can be mentioned (2). There are little information about pharmacological therapies of patients with MAP in Iran and the most effective

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regime for stabilizing patients with MAP needs to be studied in Iran (6).

#### Case presentation

The patient, a 48 year-old married unemployed male, has been hospitalized in Razi hospital due to having suspiciousness that his wife is betraying him as well as thoughts that a monitoring device is implanted in his head which controls him. This patient has started using methamphetamine 5 years ago, with a dosage of 0.1 gram per day and has gradually increased the dosage to 0.2 gram per day. The Patient grows suspicious that his wife is cheating on him 9 months after he first started using methamphetamine. He was also hearing voices in his head commenting to insulting himself and encouraging him to attempt suicide.

Last year he stabbed himself in the heart with a knife but was rescued and taken to emergency by his relatives before causing himself serious harm. His history of drug abuse goes back to when he was 20 years old by using opium with a dosage of 1 to 2 grams per day. He quit opium five years ago and started using 10 to 20 cc of Methadone which was also stopped 3 years ago. After being hospitalized, he was treated with 4 mg of Risperidone and 4 mg of Biperiden. Two days after hospitalization and before drugs taking effect, he took a spoon during a meal, broke it in half and stabbed it into his right temple forcibly more and more in an attempt to take out the imaginary device implanted in his head controlling him. Hospital personnel immediately found out about it and rushed him to neurosurgical surgery department of Haft-e-Tir Hospital for surgery the patient underwent an emergency surgery and during which the object entered his brain was removed and dural restoration and craniotomy were performed on him. After being released from neurosurgical department of Hafte Tir Hospital, he was returned back to Razi Hospital, where he was treated with anti-psychotic drugs and after two weeks no sign of psychosis were seen anymore.

After the disappearance of psychosis symptoms, through studying the encouraging factors for using methamphetamine, it was revealed that the patient is weak at social interactions and is under peer pressure and that he cannot withstand the pressure. Therefore, strategies of improving social skills for establishment of social relationships and interactions as well as assertive training were considered for him. The patient was also introduced to social skills training sessions and self-help groups. In the follow-up session, three

months after therapy, the patient was clearly able to deal with peer pressure and resist the urge to take drugs and passed a drug free course in life.

#### Discussion

The importance of this case lies in the fact that psychiatrists usually do not take delusions seriously and consider them as verbal threats which rarely lead to dangerous reactions. But delusions, which have their roots in methamphetamine abuse, are dangerous, because of their bizarre quality and the fact that patients can commit dangerous actions as a result of such delusions. Therefore, timely pharmacotherapy and rehabilitation base therapy of Methamphetamine associated psychosis (MAP), together can reduce the symptoms of psychosis. In addition to pharmacotherapy, therapies based on increasing social skills and assertiveness training and also group therapies are of particular importance. Today, we are facing the tragic health and social consequences of Methamphetamine abuse in Iran which seems to show no signs of decline (4). In order to successfully deal with this problem a number of measures should be taken including controlling drug at national and international levels, exercising effective law enforcement for controlling drug supply as well as taking effective measures to reduce drug demands. In addition to these, effective health, treatment and supportive services should be provided for limiting the problems associated with drug abuse (7).

#### Conclusion

Abuse of stimulants, especially methamphetamine (Glass) can lead to psychosis incidence. Controlling drugs at national and international levels and exercising effective methods for reducing drug demands as well as effective treatment of supporting systems for controlling this serious problem are among effective measures which should be taken in this regard.

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