

## **Ice and psychosis: a case report**

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### **Summary**

Ice use is getting popular day by day in Bangladesh. This is a case report of a young lady of mid-twenties from urban background whose family complained that she used to take ice but she denied any history of substance use. On mental state examination, her mood was euthymic but there was delusion of grandiosity, delusion of control, delusion of persecution and systematised delusion. Finding of Magnetic Resonance Imaging (MRI) of brain was normal. We should check for history of ice use when a person of young or early adult age presents with the symptoms of psychosis.

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## Introduction

Ice is crystal methamphetamine. It's stronger, more addictive and therefore has more harmful side effects than the powder form of methamphetamine known as speed. Ice usually comes as small chunky clear crystals that look like ice. It can also come as white or brownish crystal-like powder with a strong smell and bitter taste. Other names for ice are Crystal meth, shabu, crystal, glass etc.<sup>1</sup> It is generally smoked (the effect almost immediately) or injected (effect within 15 to 30 seconds). It is sometimes swallowed (15 to 20 minutes for the effects) or snorted (3 to 5 minutes for the effects).<sup>1</sup> There is no safe level of ice use. The effects of ice can last for up to 12 hours.<sup>2</sup> High doses of ice and frequent use may cause 'ice psychosis'. Ice psychosis usually disappears a few days after the person stops using ice,<sup>1</sup> or till one month.<sup>3</sup> Availability and use of ice is increasing in Bangladesh day by day.<sup>4</sup>

## Case study

A young lady of mid-twenties came to visit in the outpatient department of Psychiatry of a private medical college in Dhaka, Bangladesh. As she stated, she belonged to a well reputed and wealthy family. Her father was one of the owners of one large jute mill in Bangladesh. She got married at the age of sixteen with one of highly reputed business tycoons in Bangladesh. She gave birth to twins five months back. Regarding family history, she stated that her brother was one of the owners of a Bank in Bangladesh and her husband was the owner of a group of companies. On mental state examination, she was a very well groomed and dressed young lady of mid-twenties. Eye to eye contact was established and maintained. Rapport was established instantly and it was flawless during the session. There was no eccentric behaviour and she was very bold and confident in her conversation during the entire session. Her speech flow and quantity was normal and there was no abnormality or incoherence. Her mood was euthymic and affect was congruent. She had the belief that there was a microchip implanted in her chest wall possibly in the heart area. It was implanted when she went on cardiac arrest after the recent delivery of her baby. She believed that she was mentally sound. She denied any history of substance use. But her informants described a complete different scenario. According to the reliable informants, she had been using multiple substances for last four years. At first, she was taking yaba for one year. Then she started taking ice with her friends. For last one year she was paranoid. But since child-birth, her behaviours and thoughts became completely eccentric. She believed that she delivered twin babies, though she just gave birth of a boy. Her family was affluent but not like as she was describing. Even her father, brother and husband were not businessmen at all which indicated that she had delusion of grandiosity. She had the belief that she had a chip implanted in her body that could control her bowel and bladder, which indicate that she had delusion of control. All the routine investigations and MRI of brain were done. There was nothing significant in the investigation reports.

## Discussion

Psychotic symptoms and syndromes are frequently experienced among individuals who use methamphetamine, with recent estimates of up to approximately 40% of users affected.<sup>5</sup> Though transient in a large proportion of users, acute symptoms can include agitation, violence, and delusions, and may require management in an inpatient psychiatric or other crisis intervention setting. In a subset of individuals, psychosis can recur and persist and may be difficult to distinguish from a primary psychotic disorder such as schizophrenia.<sup>6</sup> Differential diagnosis depends with careful assessment of the temporal relationship of symptoms to methamphetamine use, aided by state-of-the art psycho-diagnostic assessment instruments and use of objective indicators of recent substance use (i.e., urine toxicology assays), coupled with collateral clinical data gathered from the family or others close to the individual, diagnostic accuracy can be optimized and the individual can be appropriately matched to a plan of treatment.<sup>7</sup>

A methamphetamine-induced psychotic disorder is diagnosed when the observed psychotic symptoms exceed the known and expected effects of intoxication or withdrawal from methamphetamine. Dose-response relationship between methamphetamine use and psychotic symptoms showed with a five-fold

increase in the odds of psychotic symptoms in the presence of methamphetamine use.<sup>5</sup> Individuals with underlying primary psychotic disorders have substantially higher rates of illicit drug use, including amphetamines.<sup>7</sup> Two competing theories have been posited to explain the robust finding that psychosis can become chronic and persistent among methamphetamine users: either a pre-existing schizophrenia may be unmasked or triggered by methamphetamine use, or methamphetamine psychosis may share a very similar clinical course to that of schizophrenia. While the latter is supported largely by Japanese studies, in which investigators described a prolonged methamphetamine psychosis observed even among individuals without psychiatric risk factors or history, the notion of “latent schizophrenia,” expressed in response to methamphetamine use as a triggering event, is increasingly recognized as a Western theory.<sup>8</sup> A third, more recently proposed integrated theory contends that methamphetamine psychosis and primary psychosis are not distinct diagnostic entities, but rather fall along a continuum of psychosis. According to this model, the methamphetamine-psychosis association is understood within the framework of a stress-vulnerability paradigm; as such, the potential for an individual to develop psychosis both in the context and absence of methamphetamine use (for those with prolonged psychotic symptoms following cessation) is a function of one’s vulnerability.<sup>9</sup> Ice use is getting popular among the rich people in Bangladesh. Recently in Bangladesh, few factories were discovered producing this illicit drug.<sup>4,10</sup> Our case can be regarded as an example of psychosis which is clearly associated with prolonged ice use.

## Conclusion

Prolonged ice use can lead to psychosis. So, when a patient of young or early adult age comes with the presentation of psychosis, we should look for the history of ice use and plan the management accordingly.

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