

Methamphetamine abuse, psychosis and your patient

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Abstract

Recent findings from the MRC-led South African Community Epidemiology Network on Drug Use (SACENDU) Project (which collects data on treatment episodes from substance abuse treatment centres) point to a significant and unprecedented increase in the proportion of clients reporting methamphetamine (MA) as their primary and/or secondary drug of abuse at these specialist substance abuse treatment centres in the Western Cape. For example, the proportion of clients reporting methamphetamine-related problems has increased from 5% of the total treatment population at Cape Town Drug Counselling Centre (the largest non-profit outpatient treatment centre in Cape Town) in 2003 to between 44% and 48% of the treatment population in 2004.¹

(SA Fam Pract 2006;48(2): 56-57)

Pharmacodynamics

The rapidly growing popularity of MA poses a new challenge to the health sector as MA is associated with a range of acute and chronic health and social problems that need to be considered during the course of treatment. More specifically, MA is a powerful psychoactive stimulant which provides users with a sense of euphoria and energy through facilitating the release of large amounts of the neurotransmitters dopamine, noradrenaline and adrenaline from the *nucleus accumbens*. In the long-term, MA acts as a neurotoxin with regular users showing a loss of dopamine transporters in the caudate and putamen, an early reduction in the density of cortical white matter, reduced glucose metabolism in the thalamus, caudate and putamen, and increased glucose metabolism in the parietal cortex.^{2,3} These structural brain changes are associated with acute and chronic cognitive impairments (specifically recall and recognition) and emotional deficits (such as lasting depression, negative symptoms of psychosis, and anxiety) which only partially improve with abstinence.^{4,5}

Management

Psycho-social aspects

These emotional and cognitive deficits have important implications for the treatment and management of MA-using patients. The key role of most Family

Physicians would be to refer patients to a suitable substance abuse treatment provider. Suitable substance abuse treatment providers would be registered with the National Department of Social Development, would provide a structured programme that is based on evidence-based models of treatment (such as the Matrix model, Cognitive Behavioural models, Twelve-step models, and Motivational Enhancement Models), and would have a good mix of professional and paraprofessional staff. In addition, with methamphetamine-abusing patients, the Family Physician needs to assess the patient's level of cognitive functioning (especially any deficits relating to learning and memory) to determine whether the patient can travel safely to outpatient treatment services or whether they would be better suited to a supervised inpatient or residential treatment programme. As part of an effective referral strategy, the Family Physician should also make sure that the treatment programme is aware that methamphetamine-abusing patients may have cognitive deficits and that the programme is able to compensate for difficulties in learning and memory through using cognitive strategies such as breaking complex tasks into simple steps; providing patients with a clear and well-structured treatment programme; and using repetition, behaviour rehearsal and pictures to reinforce and enhance learning and skill

acquisition during treatment.³⁻⁴ In addition, the Family Physician should also ensure, prior to referring patients to a substance abuse treatment programme, that the programme is able to treat patients with co-occurring mental health problems. For example, people with MA-related problems may experience lasting depression and anxiety that should be managed as part of an effective treatment strategy. The failure to manage these emotional deficits may result in the patient self-medicating with MA in order to alleviate emotional discomfort.^{3,4,5}

MA-induced psychosis

Acute and/or chronic MA-induced psychosis also poses a challenge to the health sector as MA users in other parts of the world often present at emergency rooms, psychiatric and general hospitals, and at general practitioners with the following symptoms⁴⁻⁶:

- Paranoia
- Auditory hallucinations.
- Well-formed persecutory delusions.
- Labile and/or inappropriate affect that may include uncontrollable outbursts of rage and violent behaviour.
- Negative symptoms of psychosis.

It is highly probable that MA users in South Africa will also seek assistance from primary and emergency health care services, thus necessitating the

training of service providers in the diagnosis and management of MA-induced psychosis. Mental health and substance abuse treatment service providers also need to be trained to distinguish between MA-induced psychosis, other forms of toxic psychosis, and non-toxic psychosis as these require different long-term management strategies.

At present, the most commonly accepted regime for stabilizing patients with acute MA-induced psychosis is the following: 5 mg Haloperidol IM, 1 mg Clonazepam IM, 1 mg Benzotropine IM; placing the patient in a quiet dimly lit room or, if this is not practical, a room with low levels of noise and sensory stimulation; and if necessary placing the patient in restraints.⁵ Residual paranoia and agitation among patients should be managed through providing these patients with a safe, reassuring treatment environment and conducting brief and directive behavioural interventions that recommend sleep,

nutrition and low stimulation.

A further challenge to primary and emergency health care service providers lies in the detection and management of MA withdrawal and overdose. Health care professionals need to be trained to recognize and distinguish MA withdrawal from other withdrawal syndromes. They also need to be trained to manage the symptoms of MA overdose that include⁶:

- Dehydration
- Hyperthermia
- Seizures
- Strokes
- Myocardial infarctions.
- Hepatic failure.
- Rhabdomyolysis

Conclusion

Given these challenges that MA poses to health professionals, this short report makes a strong case for the role of the health sector in the provision of evidence-based treatment for MA abuse and MA-related health problems. In

order to fulfill this role, it is important that the health sector (such as the Department of Health, Medical Schools and experienced and competent service providers) provides health care professionals with evidence-based information and training related to the diagnosis and management of MA misuse and related health problems. ✎

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Press release

Merck donates to Alexandra Health Centre



Merck South Africa's social responsibility programme focuses on the upliftment of disadvantaged communities through the improvement of rural healthcare. One such programme is the Alexandra Health Centre and University Clinic and recently made their annual contribution of R40 000.

For almost 20 years, Merck SA has supported the Centre; at least one of Merck South Africa's employees was born

at Alexandra Health Centre and a number of the employees' children were delivered there. Deon Vos, CEO of Merck, says, "Escalating running expenses, the replacement of equipment and the salaries of experienced, dedicated staff all contribute towards the costs. Merck contributes to the Clinic in the hope that our donations will assist in keeping its doors open to continue providing the outstanding service for which it has become renowned."

The Alexandra Health Centre is a medical facility in the heart of Alexandra Township but not everyone who comes to the clinic is in need of medical attention. Many visit to simply sit in the gardens, which are a rarity in the township. While Alexandra Health Centre does provide basic healthcare to the community, it is primarily a maternity facility. However, as with many clinics like this one, funding from the Government is minimal and they are reliant on contributions from business and the public.

Vos concludes, "We are so proud of our association with the Alexandra Health Centre and want to say a big 'congratulations' to the Centre and staff for the difference they continually make in their community."