

Ecstasy — Dental Implications

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Ecstasy (also known as 'love drug', 'XTC' or 'E') is the name commonly used for the illegal designer drug related to amphetamine, 3,4 methylenedioxy-methamphetamine (MDMA). MDMA was patented in 1914 as an appetite suppressant, has been investigated as a mood modifying agent, but with its predecessor 3,4 methylenedioxyamphetamine (MDA) is now widely (and wrongly), promoted as a safe, non-toxic means to 'warm loving relaxation'.

In the UK, MDMA is listed as a class A drug under the Misuse of Drugs Act 1971. Its notoriety relates to its use where 'recreational doses' taken at 'raves' involving vigorous dancing has led to 15 deaths in the last two years,¹ probably attributable to severe hyperthermia. Many users of MDMA, however, experience less severe adverse effects. In a study undertaken in 1986, 29 volunteers given 'recreational doses' (75mg to 150mg) of MDMA all experienced undesirable physical symptoms: 28 lost their appetite, 22 had trismus or bruxism, nine had nausea, eight had muscle aches and stiffness, three ataxia. Sweating was common and tachycardia and hypertension were recorded. Subsequently, 23 noted fatigue for hours or days and 11 had insomnia,² (acute effects tend to resolve in 48 hours).

Regular users of MDMA frequently chew gum to overcome the effects on their jaw muscles; they may also suffer weight loss, exhaustion, jaundice, 'flashback', irritability, paranoia, depression, psychoses, nystagmus, diplopia, and a desire to be in motion. Long-term use has yet to be fully documented but may result in hepatotoxicity causing unexplained jaundice and possibly long term psychiatric effects.³

MDMA is one of several drugs that induces dystonic effects. Repeated muscle stiffness, trismus and bruxism could lead to attrition and complaints of myofascial and temporomandibular joint pain. Relief of such symptoms may be by sugar-containing gums.

MDMA causes xerostomia and this, exacerbated by dehydration from vigorous activity, is usually relieved by taking soft drinks whose sugar content is thought to enhance the absorption of ecstasy. Soft drinks often have a low pH which, with their sugar

content, could increase enamel erosion and dental caries rates.

Psychotic side-effects could lead to patient handling problems and adversely affect sedative and anaesthetic procedures.

The ingestion of any amphetamine carries the potential for fatal adverse drug interactions with antidepressants (especially monoamine oxidase inhibitors but also tricyclics) both of which are recommended for the treatment of idiopathic dental and facial pains which may include myofascial and temporomandibular joint pain.

Hepatotoxicity does not (at present) appear to be a major complication of MDMA abuse. Although users of MDMA have often been previously exposed to other forms of drug abuse, such users do not normally have a history of a heavy alcohol intake, intravenous drug misuse, or infectious hepatitis.

Dental Implications

- Patients with increased labial enamel erosion and cervical caries not accounted for by dietary indiscretion, xerostomia, tooth defects, acid fumes, or in association with palatal and lingual erosion in bulimia or acid regurgitation
- those responding poorly or unpredictably during dental treatment or sedation for no obvious reason, possibly suggesting a psychotic cause
- some cases of unexplained attrition and/or myofascial pain
- patients for whom the prescription of a tricyclic or monoamine oxidase inhibitor drug is being considered, such as for myofascial or atypical facial pain.

Possibly, such patients will not readily volunteer that MDMA use is a possible cause of their problem or complaint since it is both iatrogenic in nature and related to drug abuse.

Once MDMA use has been determined then advice regarding its effects and stopping use, such as referral for counselling, will need to be considered. Dental side-effects could also be countered by the use of preventive measures such as fluoride mouthwash, sugar-free chewing gum, drinking water (bottled) rather than soft drinks, provision of a soft splint. Patient confidentiality is a matter of individual judgement.

The groups affected are most likely to be teenagers or young adults. Limited information exists on the level of MDMA abuse. One longitudinal survey of 776 14–15 year olds in the north west of England in 1991 found 36% had tried a drug (cannabis 32%, amyl nitrite 14%, LSD 13%, solvents 12%, psilocybin 10%, amphetamine 10%, MDMA 6%).⁴ Other surveys in the UK have found lower levels of abuse whilst reported regular use, monthly or more frequently, is lower still. Such use however still represents significant numbers of subjects and overall MDMA is widely abused in the UK, USA and other countries world wide.

References

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