Accidental ingestion of Ecstasy by a toddler: unusual cause for convulsion in a febrile child

A J Cooper, C V Egleston

Abstract
The case is reported of a toddler who presented with an apparent febrile convolution. The final diagnosis was that of accidental ingestion of Ecstasy. The child made an uneventful recovery. Ecstasy toxicity should be added to the list of differential diagnoses in a child presenting with fever and an unexplained seizure.

Keywords: Ecstasy; toddler; accidental ingestion
Reports from several countries confirm an increase in the availability and use of Ecstasy (3,4-methylenedioxymethamphetamine or MDMA). Medical papers and current media attention centre on its toxic effects in adolescents and young adults. Accidental ingestion of Ecstasy by a young child has been described before under circumstances where the history of ingestion was immediately and frankly made available to medical staff. We present a case which shows that—for obvious reasons—parents may not always be so forthcoming with a relevant history of ingestion of illicit substances.

Case report
A two year old girl was brought urgently to the accident and emergency department by her mother in the early afternoon. She had suddenly become unwell and her mother gave a history of a probable generalised seizure. She was on a course of amoxycillin for an upper respiratory tract infection. The girl had a history of speech delay for which she was attending speech therapy. Her 21 year old mother appeared somewhat withdrawn, although appropriately anxious about her child’s condition.

On examination the girl was agitated and crying inconsolably. She had a respiratory rate of 48/min, an axillary temperature of 39°C, a sinus tachycardia of 207 beats/min, and a blood pressure of 120/60 mm Hg. She was noted to have dilated (7 mm), reactive pupils. Examination was otherwise unremarkable. The initial diagnosis was of a febrile convulsion secondary to an upper respiratory tract infection, although it was recognized that the child’s agitation and extreme tachycardia were not typical of a febrile convulsion. She was tepid sponged, given oxygen and rectal paracetamol, and admission arranged.

Following admission the child began grinding her teeth and had an oculogyric crisis. She was prescribed intravenous diazepam. It was noted on the ward that the mother also had dilated pupils. On further questioning the mother reluctantly mentioned possible ingestion of an unknown substance, as she said that she had found some white chalky matter in her child’s mouth. Given this history of ingestion, gastric lavage was performed under general anaesthesia. The girl subsequently made an uneventful recovery with no change in any biochemical or haematological indices.

A drugs screen was requested on urine and gastric lavage samples and the results were available the following day. Chromatography of the stomach contents detected the presence of MDMA. Chromatography of the child’s urine detected the presence of MDMA and its metabolite MDA (methyleneamoxymethamphetamine). Confronted with the toxicology results the mother admitted that her child had managed to put one Ecstasy tablet in her mouth when she was left unattended. The tablet had been left in a cup on a bed awaiting consumption. On re-entering the room the mother had immediately realised that the tablet was missing and was able to clear some of it from her daughter’s mouth.

Discussion
Acute Ecstasy toxicity may cause cardiac dysrhythmias, severe hyperthermia, coma, convulsions, rhabdomyolysis, hepatic and renal impairment, and disseminated intravascular coagulation. Bruxism (grinding of the teeth) and an acute dystonic reaction have also been reported. Toxicity does not appear to be necessarily related either to the amount ingested or the serum concentration. In the United States, few cases of death or severe reaction have been reported, despite its widespread use. Observed differences in toxicity between the United Kingdom and the United States have been attributed to the circumstances in which Ecstasy is consumed. In the USA it is usually taken alone or at parties while in the United Kingdom it is used largely as a “dance drug”, ingested at a time of marked physical exertion, generally in a warm environment with variable fluid intake. There is only one previously reported case of Ecstasy toxicity in a young child. In neither the previous case nor this one did any haematological or biochemical abnormalities develop. Both children made a full recovery. It is assumed that they were both normally hydrated before ingesting the drug.

Young children may ingest any harmful substance that is left unattended or insecure. As the use of recreational drugs increases, the incidence of their accidental ingestion by children may similarly rise. Children’s exposure to Ecstasy may be limited in the United Kingdom, as it is largely consumed in nightclubs and at “raves”. Children may conversely be put at more risk by the continuing false perception of Ecstasy as a safe drug outside the club environment. Such beliefs may lead to a more relaxed attitude to supervision and security when Ecstasy is present in the home.

This case illustrates the difficulty in making a diagnosis of drug ingestion in a young child if the parent or guardian conceals relevant history. Ecstasy toxicity should be added to the list of differential diagnoses in a child who presents with fever and an unexplained seizure. To make the diagnosis of a drug induced convulsion in these patients it is essential that the physician has a high index of suspicion.

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