

Accidental Amphetamine Poisoning in an 11-Month-Old Boy

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Abstract—We report accidental ecstasy poisoning in an 11-month-old boy. **Case report:** the infant at the parental home accidentally ingested ecstasy had neurological disorders such as behavioral disorders made of agitation and tonicoclonic convulsions, muscle hypertonia, cardiovascular disorders (tachycardia). The other causes of seizures quickly eliminated you such as hyperpyretic seizures, head trauma, and meningoencephalitis. The search for toxins in the blood, my urine and gastric juice was positive with a high concentration for methamphetamine. The evolution was favorable after 48 h of respiratory assistance under sedation. **Comment:** Intoxications in children with ecstasy are rare, but currently is reported several cases of accidental ingestion of tablets. Ecstasy reserved for festive events; its use seems to extend to the home of users. The presence at home of this derivative of amphetamine, exposes young children to accidental ingestion by negligence of tablets left within their reach.

Keywords— Accidental poisoning -Ecstasy.

I. INTRODUCTION

Synthetic psychotropic amphetamines characterized by their psychostimulant, hallucinogenic effect. Some are prescribed under authorization as in the treatment of narcolepsy. There are several types of synthetic narcotics that are analogues of illegally produced amphetamines [1].

- 3,4 Méthylène-dioxyméthamphetamine (MDMA) or Ecstasy is the most commonly used drug in youth.

- Easily synthesized Methamphetamine Hydrochloride (ICE) that can be smoked, crushed and aspirated nasal or dissolved and injected intravenously (IV)

-The cathinone and its derivatives

Amphetamines pass the blood-meningeal barrier. They act on the central and peripheral nervous system by releasing catecholamines.

Drugs and household products are responsible for acute poisoning of children. Illicit drugs or products are increasingly causing accidental intoxication due to widespread use in society. We do not have accurate statistics on accidental ingestion. We report here the case of an 11-month-old infant hospitalized after accidental ingestion of several ecstasy tablets.

II. OBSERVATION

The 10-month-old child weighing 10 kg at home following an accidental ingestion of several ecstasy tablets, had suddenly presented a state of agitation, muscle hypertonia, teeth grinding, trismus and hypersalivation. The time between ingestion and onset of symptoms was half an hour.

The infant is transported to the medical and surgical emergency department in a small community. On admission he presented recurrent generalized tonic-clonic crises without recovery of consciousness, not responding to treatment with benzodiazepines. The directed interrogation of both parents quickly ruled out the notion of recent head injury or ingestion of medication or toxic. Medical treatment was provided by an anaesthetic assistant who performed intubation and sedation. The infant was transferred to our hospital and university center in Sidi Bel Abbes.

We continued respiratory assistance, somatic examination found pupils in myosis (sedation), mydriasis was not reported on the report of the structure that evacuated the infant. A biological assessment shows CPK at 235.8 iu/l, blood creatinine at 1.49 mg/l, LDH at 312 iu/l. The management, in addition to the systematic and usual measurements, was carried out a rehydration on the basis 100 ml/ kg/ 24 associated with a hemodynamic support with noradrenaline 0.2 µg/ kg/ min. Gardnal-type anticonvulsant 30 mg/24h. A systematic urine toxicology assessment was positive for high concentrations of amphetamines. The infant is extubé on the 3rd day of hospitalization without accidents or incidents, then transferred to J4 in pediatrics with a control electroencephalogram.

III. DISCUSSIONS

Ecstasy or MDMA; combines amphetamine and hallucinogenic properties. After cannabis, it is the most common illicit substance. Its stimulating and entactogenic properties are particularly sought after by users [2].

MDMA is an indirect sympathomimetic; it works by promoting the release of serotonin; dopamine and noradrenaline) from their storage sites. The clinical picture of acute intoxication in adults combines stimulation of the central nervous system and activation of the sympathetic system (tachycardia, hypertension and mydriase). Neuropsychiatric disorders most often consist of a confusion syndrome, or even a delusional state with hallucination. The main possible complications in users are convulsions, hyperthermia (sometimes malignant) with multivisceral failure, rhabdomyolysis, liver damage or hyponatremia [3].

Data on the risks of acute poisoning in infants or young children are scarce; they are always accidental intakes. The often colorful and attractive appearance of ecstasy tablets (fig1) can contribute to the occurrence of such accidents. Ten cases have been reported in the past 15 years [4] [5].

Fig1. Ecstasy tablets based on an overview of geographical trends in MDMA in the United States since 2002 CAMERON HOLBROOK 12 APRIL 2018.



The only published series of amphetamine poisoning is that of Pauwels et al [6] who reported 13 pediatric cases of MDMA poisoning and compared the main clinical manifestations. Twelve children had neurological signs: convulsions (3/13), abnormal movements (4/13), agitation (4/13), hypertonia (3/13), nystagmus (3/13). Eleven had signs of stimulation of the sympathetic system: tachycardia (11/13), hypertension (10/13), hyperthermia (9/13), mydriase (9/13), tachypnea (4/13), sweat (3/13). Only one child had a multi-organ failure. The latter had renal, pancreatic, hepatic and muscular dysfunction associated with a disseminated intravascular coagulation syndrome a few hours after ingestion of ecstasy. Everything was gradually back to normal after the MDMA disappeared from the urine.

The management of amphetamine poisoning is, if the airways are free, primarily symptomatic to control agitation

and hyperthermia. It is based on benzodiazepines and hydration. Failure and persistence of major hyperthermia may require intubation and myorelaxation [7].

IV. CONCLUSION

Amphetamine poisoning has become increasingly common and those in children described in the literature are exclusively secondary to accidental ingestion of ecstasy. The symptoms appear quickly and can be extremely severe justifying a quick and optimal medical management.

Expressions of Interest:

The authors declare that they have no links of interest.

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