Summary of Advanced Treatment in Cocaine OD

Since the cause of an altered mental status in a person before having a lab test is never clear, initial treatment should comprise of the following

1. ABC's (airway, breathing, cardiovascular support)
2. 100 ml 50% dextrose intravenously for reversal of a potential hypoglycemia
3. Thiamine 100 mg intramuscular for a potential alcoholic intoxication and for prevention of a Korsakoff syndrome
4. 2 mg naloxone intravenously for reversal of a potential opioid overdose

This is followed by a particular regimen treating the symptoms because a specific antidote is not available. Special attention should focus on potential cardiac arrhythmias as they are the prodromi of detrimental ventricular fibrillation (Fig. 44).

Treatment of Tachyarrhythmia

- Labetolol (0.25 mg/kg), or
- Esmolol (100 mg/kg/min), or
- Lidocaine (50–100 mg), or a second-line
- Ca^{++}-channel blocker (i.e. Verapamil 2.5–5.0 mg)

Treatment of Ventricular fibrillation

The only effective therapy is the use of a defibrillator for electric cardioversion applying 200–400 J.

E. Freye, *Pharmacology and Abuse of Cocaine, Amphetamines, Ecstasy and Related Designer Drugs*,
DOI 10.1007/978-90-481-2448-0_12, © Springer Science+Business Media B.V. 2009

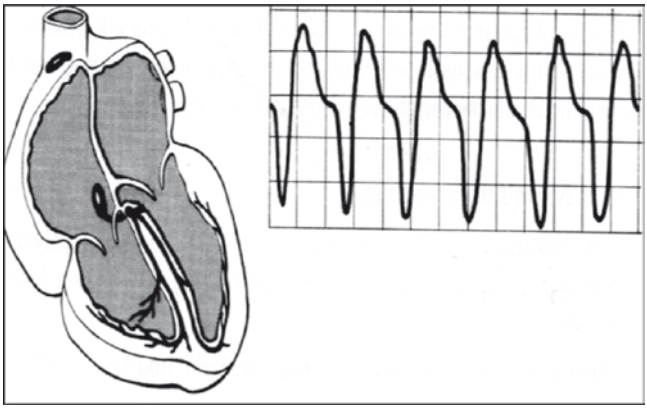

Fig. 44 Cross-section of the heart with the atrial pacemaker and the AV-node, both of which are involved in cocaine-related tachyarrhythmia, a premonitory sign of ventricular fibrillation

Treatment of Hypertension

- Na-Nitroprusside infusion, or
- Urapidil (25–50 mg), or
- Nitrogylcerine infusion or
- Glycerolnitrate Spray or
- Nifedepin sl (5–10 mg) or
- Clonidine (0.15 mg slowly iv)

Treatment of Hyperthermia

- Cold infusions
- Ice cubes axilla/groin
- Dantrolene 2.5 mg/kg repetitively

Treatment of Seizures

- Diazepam (10–20 mg), or
- Midazolam (5–15 mg), or
- Phenobarbital (50–100 mg), or
- Clonazepam (1–2 mg)

Since there is no specific antidote available therapy consists of treatment of symptoms until the acute effects are gone

Lethal Doses of Cocaine

There's a lot of debate, and not a lot of data, about the lethaI dose of cocaine. The lack of uniformity seems to have much to do with the extreme variation in individual response to cocaine. The classic *fatal* dose has been reported to be 1.2 g (orally), but there are no studies to underline this. Anecdotal reports from ER's and coroners suggest, that death from a single intranasal dose of 20 mg may ensue. Viewed from the perspective that the minimum dose required to get either a subjective *high* or objective findings of increased blood pressure, etc. is 25 mg, makes this all the more alarming. Individuals with defects in their ability to neutralize cocaine (pseudocholinesterase deficiency) may suffer death from relatively small doses. Since smokers are rarely able to regulate their intake (some freebase binges last for days), these abusers are at very high risk for overt toxicity.

Report from emergency departments (EDs) are typical of what is been seen by paramedics and other emergency department personnel many times often late at night. The report of a "witnessed seizure" is reminiscent in which a young athlete was reported to become agitated, with his eyes rolling back and observed to be vomiting and foaming at the mouth. In this case, the paramedics were unable to help him while in other cases, the outcome was more favorable. Typically these patients are commonly seen after exhibiting a seizure, or a hypertensive crisis. It must always be kept in mind, that aside from acute effects, there is also a long-term damage being done to the transmitter system.