Clinical and analytical features of severe suicidal quetiapine overdoses--a retrospective cohort study.

Abstract:
Detailed data on severe overdoses with quetiapine are relatively sparsely reported in the literature. To describe a cohort of 20 acute quetiapine overdoses and provide additional data on the pharmacokinetics and clinical features of intoxication with this drug. A retrospective study was conducted on patients with quetiapine poisoning admitted to our institution. We included moderate to severe overdoses between 2005-2011 who required admission to ICU. Predominantly female patients (n = 17) ingested a median dose of 9.8 g quetiapine. Poison Severity Score was moderate in 9 patients, severe in 10 patients and in one case fatal. Quetiapine was analytically confirmed in all cases. Clinical manifestations included drowsiness or coma (all patients), tachycardia (12 patients) and hypotension (10 patients). Seizures and arrhythmia occurred in 4 patients, each. Intubation and mechanical ventilation was required in 14 patients due to seizures, respiratory depression or loss of airway protection and 15 patients developed pneumonia. Hypokalaemia and hyperglycaemia were present at admission in 10 and 5 patients, respectively. Despite frequent prolongation of the QT(c) in 13 patients, QT interval was normal in most cases and QRS-interval was prolonged in only one patient. Presumably anticholinergic delirium was recognised in 8 patients and 6 patients received phystostigmine with
good clinical response. In 13 cases quetiapine was analysed quantitatively in serum with a relevantly prolonged half-life (16 ± 12 h) and a median peak serum concentration of 3074 ng/mL. In 4 of these 13 patients we observed an increase of quetiapine serum concentration in the further course. In this study, quetiapine overdoses were associated with significant toxicity and a fairly high number of complications. A careful and often prolonged clinical observation in the more severe cases of overdose seems mandatory.