LETTER TO THE EDITOR

Successful resuscitation of a patient with continuous venovenous hemodiafiltration following intoxication from verapamil and trandolapril

Dear Editor,

The incidence of accidental or intentional intoxication resulting from calcium channel blockers (CCBs) overdose has increased in recent years. We herein present the case of a female patient whose condition deteriorated even after she had received the maximum possible medical treatments following intoxication, but was successfully resuscitated following continuous hemodiafiltration (CHDF).

A 26-year-old female patient had received 4.8 g of verapamil and 80 mg of trandolapril (Tarka Forte). No abnormality was noted in the systemic examination, and gastric lavage was performed. Four hours after admission, the patient began to develop hypotension. Dopamine infusion was started. The patient was given intravenous infusion of calcium, 2 mg glucagon, 20% intralipid solution infusion, and 20 U/hour insulin, along with 30% dextrose solution. However, even though vasopressor agents were continued at the maximum dose, hypotension persisted, and she subsequently developed bradycardia with third-degree atrioventricular block. The patient was intubated and a transvenous pacemaker was inserted. Her blood analysis revealed the following measurements: pH, 7.14; PCO2, 35 mmHg; HCO3, 7.1 mmol/L; and lactate, 8 mmol/L. Continuous venovenous hemodiafiltration (CVVHDF) was initiated. The patient’s condition improved, with systolic blood pressure reaching 80–90 mmHg. She was extubated 12 hours later.

However, the CVVHDF treatment was continued for another 36 hours. On the 3rd day after her admission, the patient developed breathing difficulties, and her SpO2 levels dropped to 75%. After a thorax tomography showed bilateral pleural effusions (Fig. 1), bilateral pleurocentesis was performed. An echocardiography revealed normal results. Noncardiogenic pulmonary edema was diagnosed, and the patient was started on furosemide infusion.

On follow-up, there was no hypotension or bradycardia. The patient was discharged, following a psychiatric assessment, on the 8th day after she had been admitted.

Verapamil overdose is a potentially lethal condition, and treatment mainly involves taking supportive measures. The treatment options are decontamination, administration of vasopressor agents, infusion of glucagon, hyperinsulinemic-euglycemia therapy, and intravenous lipid emulsions [1]. Continuous hemofiltrations have little cardiovascular impact and are therefore safer to use on patients who have low blood pressure. There are several reports in the literature about cases of severe CCB intoxication, including several reports of severe cases that were resistant to aggressive medical therapy and were treated with cardiopulmonary bypass, plasma exchange, and CHDF [2–4]. Therefore, CHDF may be considered for patients like ours, who are hypotensive and unstable and also unresponsive to conventional treatment. In conclusion, we have demonstrated the effectiveness of CHDF in the treatment of severe CCB intoxication.
References


*Corresponding author. Department of Emergency, Konya Training and Research Hospital, Selçuklu Mahallesi, Tekke Caddesi 51/C, 42090 Selçuklu, Konya, Turkey. E-mail address: emineakinci@yahoo.com (E. Akinci)