Heamodiafiltration For Massive Drugs Ingestion

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Citation


Abstract

Sir,

We report a patient who had a severe respiratory and renal failure due to the massive ingestion of morphine, bromazepam, mianserine, and codeine and who was successfully treated continuous veno-venous hemodiafiltration (CVVHDF).

The patient was admitted in our Unit in a critical condition. She was in coma (Coma Glasgow Score 5), respiratory rate 5 breaths per min. Arterial blood pressure was 70/40 mmHg; heart rate was 152 beats per min, and arterial blood gases (fractional concentration of inspired gases 0.21) showed a partial arterial pressure of oxygen of 42 mmHg, and a carbon dioxide 95 mmHg. pH was 7.20 and arterial oxygen saturation 78%. An accurate anamnesis revealed the massive ingestion of morphine, bromazepam, mianserine, and codeine for suicidal aim. The patients was intubated and ventilated with intermittent positive pressure mechanical ventilation (Tidal Volume 7 ml/kg, respiratory rate 12 breaths per min, fractional concentration of inspired gases 0.5). Naloxone, Flamazenil were given up to standard doses. Dopamine was started at 8 \text{ kg}^{-1}\text{ min}^{-1}. The patient partially improved. One day later a severe renal failure with diuresis kept (creatinine 4.6 mg/ml, K+ 5.7 mmoles/ml) complicated the Intensive Care stay. Immediately a CVVHDF was started (blood flow 120 ml/h, ultrafiltrate rate 500 ml/h, dialysate 30 ml/h) and performed for 30 hours using a D-30NR polysulfone Diafilter (Minntech, Minneapolis, MN). At the end of treatment the patient improved and sensory was correct. Arterial blood pressure was 120/75 mmHg; heart rate was 98 beats per min; arterial blood gases (fractional concentration of inspired gases 0.5) were partial arterial pressure of oxygen of 94 mmHg, and a carbon dioxide 37 mmHg; pH was 7.35 and arterial oxygen saturation 95%. Respiratory weaning was started and successfully completed in 24 hours.

The patient was then transferred to the Medical Unit, then discharged home and alive after 14 days.

This report suggests that CVVHDF can be effective in the treatment of renal failure due to drugs intoxication. This modality offers the advantage of slow sustained removal of drugs without hemodynamic instability. Only a few papers reported the use of CVVHDF for treating drugs intoxication (1, 2). Moreover many Authors suggest that continuous renal replacement therapy have to be considered the choice therapy in Intensive Care Unit patients affected by acute renal failure (3, 4) respect to the conventional dialysis.

Concerns regarding the hazards of transporting critically ill patients to the Dialysis Unit and the absolute haemodynamic stability have demonstrated continuous renal replacement therapy to be safer (3, 4), but this concept has not been widely accepted. Future research should be done into the efficacy of continuous renal replacement therapy in the treatment of massive ingestion of drugs.

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