Delayed presentation of serotonin syndrome after co-ingestion of serotoninergic agents and benzodiazepines

Chen Hsien-Yi, Wu Meng-Huan, Lynn Jiun-Jen, Chen Hang-Cheng, Liao Shu-Chen. Department of Emergency Medicine, Chang Gung Memorial Hospital, Taoyuan, Taiwan
Contact information: Chen Hsien-Yi, MD; e-mail: m7082@cgmh.org.tw

OBJECTIVE
Serotonin syndrome is a potentially life-threatening condition that needs prompt recognition and management. The majority of cases present within 24 hours, and most within 6 hours after the ingestion. We report a case of serotonin syndrome with a delayed onset of myoclonus, developing 24 hours after a mixed drugs overdose.

CASE REPORT
A 30-year-old male attempted suicide at midnight by ingesting a massive quantity of hypnotics and antidepressants (venlafaxine, zolpidem, diazepam, trazodone and moclobemide). Finding him unresponsive in the morning, his family brought him to a local hospital. Because of sustained conscious disturbance, he was then transferred to our Emergency Department. Twenty hours after his poisoning, we received an unconscious male with a GCS of E1V2M5. Initial vital signs were: BP 89/64 mmHg; HR 115 beats/min; RR 17 breaths/min; Temp 35.3 °C. His pupil sizes were estimated at 4 mm bilaterally with adequate light reflex. Neither myoclonus nor rigidity of extremities was noted. Bilateral Babinski’s signs were negative. His urine was brown. (figure 1) Laboratory studies revealed acute kidney injury, hyperkalemia, (serum creatinine 2.92 mg/dL, K 7.5 meq/L) metabolic acidosis (lactate 47.2 mg/dL, pH 7.18, pCO2 45 mmHg, bicarbonate 16.2 mm/L) and rhabdomyolysis (creatine kinase: 75600 U/L). We gave him sufficient intravenous fluid, started a sodium bicarbonate infusion, and admitted him to the intensive care unit. About 24 hours after poisoning, myoclonus and hyperreflexia developed.

On suspicion of serotonin syndrome (based on Hunter’s criteria), we intubated this patient, prescribed lorazepam intravenously, and gave him cyproheptadine via nasogastric tube. The myoclonus subsided on the second day, so we tapered lorazepam and then extubated this patient when fully conscious.

We also arranged intermittent hemodialysis for his anuria. His urine output improved gradually in 2 weeks after admission, and his serum creatinine improved to 1.33 mg/dL on the day of discharge.

CONCLUSION
Co-ingestion of serotoninergic agents and benzodiazepines possibly delays the presentation of serotonin syndrome. Proper recognition of patients at risk for serotonin syndrome, even without typical presentations within the first few hours, prevents physicians from inadvertently precipitating serotonin syndrome by administering serotoninergic agents.

REFERENCE