

Beware of Barbiturates: Coma and Hypothermia in a 94-year-old Woman Due to Combined Secobarbital and Pentobarbital Toxicity

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BACKGROUND

Barbiturates are GABA_A agonists commonly used in-hospital for seizure control, alcohol withdrawal, headaches, and general anesthesia. Secobarbital and pentobarbital are used as primary euthanasia agents in both humans and animals and are not prescribed for general use.

METHODS

This is a rare case (last cases reported in 1979) of a patient suffering from a combined secobarbital and pentobarbital poisoning. A 94-year-old woman was found obtunded at her independent living facility. Upon EMS arrival to ED, she was spontaneously breathing with a Glasgow Coma Scale of 3 and vital signs: HR 56 bpm, BP 111/54 mmHg, temperature 35.7°C, RR 16 rpm, and room air pulse oximetry 96%. The physical exam was otherwise unremarkable. Dextrose measured 106 mg/dL; she had no response to IV naloxone. Initial diagnostics (including CT of the head, chest, abdomen, and pelvis) were unremarkable, except for rapid urine drug screen detecting barbiturates. Serum phenobarbital concentration was undetectable.

RESULTS

The patient was admitted; her clinical signs and symptoms resolved over 72 hours with supportive care. MRI of the brain was unremarkable; EEG demonstrated diffuse slowing. TSH levels were normal. Qualitative blood LC/MS toxicology testing detected both secobarbital and pentobarbital. Serum secobarbital and pentobarbital concentrations were: 3.3 µg/mL (therapeutic 1.0-2.0 µg/mL; toxic >3.0 µg/mL) and 9.5 µg/mL (hypnotic 1.0-5.0 µg/mL, toxic >10.0 µg/mL), respectively. Both concentrations were undetectable five days later. Patient improved without sequelae and was discharged to a skilled nursing facility without admitting to drug exposure, although, as a former nurse, she was knowledgeable about these drugs.

DISCUSSION

Combined secobarbital and pentobarbital poisoning is exquisitely rare and should be considered in patients presenting with hypothermia and coma, even those mimicking brain death. Treatment is largely supportive with possible use of hemodialysis for refractory pentobarbital poisoning.

CONCLUSION

In patients presenting with hypothermia and coma, barbiturate poisoning must be considered.