Toxicology Case Conference
July 31, 2025
1:30 pm – 2:30 pm

Location: Zoom (meeting details below) & In-Person 9th floor Jacobsen Hall

**Case 1:** A 48-year-old male presents to your emergency department after an intentional ingestion. He reports an argument with his family that caused him to go to his room and ingest an entire month supply of his antihypertensive medications.

* Vital signs: HR 50, BP 80/55, RR 18, T 37C, FSBS 350
* GCS 15, physical exam is unremarkable

Case 1 Objectives:

* Construct a differential for this presentation
* Discuss the mechanism of action of both medications that may present similarly to this
* Describe the management of this patient from presentation to the emergency department to the resolution of toxicity.

**Case 2:** A 16-year-old with no previous medical history presented to the emergency department after suspected overdose. Patient was reported to have had an argument with her parents, and later that evening the patient was found on the floor of her bathroom with several empty pill bottles and pink vomitus on her clothes. She arrives to the ED obtunded with sonorous respirations.

* Vital sign: HR 138, BP 88/34, RR 20, 98% on NRB, T 35⁰ C.
* Initial Labs: pH 7.32, PCO2 30, Na 140, K 4.2, Cl 100, HCO3 16, BUN 12, Cr 0.91, Gluc 95, LA 4.6

On arrival to the ED the patient vomits again and, in order to prevent aspiration, she undergoes RSI. On further history from her parents, aspirin, diphenhydramine, ibuprofen, and various multivitamins were present in the bathroom she was found in. The patient has normoactive bowel sounds and a total of 120 cc of urine on bladder scan after intubation.

Case 2 Objectives:

* Construct a differential diagnosis using this patient’s acid base status
* Consider which tests to order in order to rule in or out diagnoses on the above list
* Describe the steps that should be taken in the resuscitation and management of this patient.

**Case 3:** A 54-year-old woman with chronic tobacco abuse presents as a transfer from an outside facility after being noted to have a CO-Hgb concentration of 24.6%. She reported that she and her son had run a generator in their basement all night with the windows open in order to provide power to their home. She reports presyncope on standing with associated memory deficits. On MMSE, the patient has deficits in short term memory and concentration. Labs and ECG were within normal limits.

Case 3 Questions:

* What are your initial steps in management of this patient, from the moment she is taken from her home to arrival in the ED.
* What is the pathophysiology of disease in CO exposure?
* The patient held in the initial ED for several hours prior to transfer to a receiving center. Is there any use in transferring him now that he has had a chance to clear his CO level on NRB?
* What area of the brain is classically affected by CO poisoning? What other drugs may affect this same region?
* What chemical exposure can present with similar toxicity and what is the source?

P.S. This patient presented again to an outside hospital 2 weeks after she underwent treatment for her CO exposure complaining of poor concentration, intermittent headaches, and irritability, which were not present on discharge but began about 1 week later.

 **Journal Club: Articles attached**

1. Quitadamo P, di Lauri A, Albano R, Laudadio V, Gragnaniello P, Puoti MG, Bucci C, Isoldi S, Cirillo F, Turco R, Carangelo L, Caldore M. The effects of liquid bleach ingestion on children's esophageal and gastric mucosa. J Pediatr Gastroenterol Nutr. 2025 May 8. doi: 10.1002/jpn3.70063. Epub ahead of print. PMID: 40341791.

2. Isbister G, Chiew A, Buckley N, Harris K, Berling I, Downes M, Page C, Isoardi K. A non-inferiority randomised controlled trial of a Shorter Acetylcysteine Regimen for Paracetamol Overdose - the SARPO trial. J Hepatol. 2025 May 23:S0168-8278(25)02206-8. doi: 10.1016/j.jhep.2025.05.008. Epub ahead of print. PMID: 40414507.

Zoom Meeting Details:

Please click this URL to start or join. <https://upstate.zoom.us/j/94022814635?pwd=ZXdZOFN3OFMrN1FjWlhOTGRid3YyUT09>

    Or, go to <https://upstate.zoom.us/join> and enter meeting ID: 940 2281 4635 and password: caseconf

Join from dial-in phone line:

    Dial: +1 646 876 9923 or +1 312 626 6799

    Meeting ID: 940 2281 4635

    Participant ID: Shown after joining the meeting

    International numbers available: <https://upstate.zoom.us/u/agSuvcevx>