Assessing a Veterinary Sedative’s Role in Drug Overdose Deaths

The veterinary sedative xylazine was implicated in almost 2% of US drug overdose deaths in 2019, according to data from the State Unintentional Drug Overdose Reporting System (SUDORS).

Xylazine is used as a sedative, analgesic, and muscle relaxant in animals. Researchers documented its recreational use in Puerto Rico a decade ago and more recently in Philadelphia. Similar reports have come from Michigan and Maryland. The drug can be deadly in humans because it causes hypotension and slows the heart, breathing, and central nervous system. As xylazine appears in more drug overdose deaths and concerns have arisen about its simultaneous use with opioids, investigators at the CDC and other institutions examined its involvement in US drug overdose deaths.

They analyzed SUDORS data on overdose deaths that occurred in 2019 in 38 states and the District of Columbia. Xylazine was either found at the scene or listed as a contributing cause of death in 826 of 45,676 overdose deaths in 25 states. It was listed as a cause of death in 64% of the cases. A majority of the deaths occurred in White individuals, males, and in northeastern states. Nearly all the deaths also involved the potent synthetic opioid fentanyl. Cocaine and heroin were listed as a cause of death in one-quarter to one-third of the cases.

The authors included an additional cautionary note. “Naloxone administration might not be as effective at fully reversing overdose-related signs and symptoms when xylazine and highly potent opioids such as fentanyl are present, although naloxone should always be administered,” they wrote.

Because no antidote to xylazine is available, the authors recommended that clinicians who suspect a xylazine-involved overdose should provide immediate supportive care, including cardiovascular and respiratory support. Routine postmortem toxicology testing for xylazine in drug overdose deaths could provide more information about the drug’s involvement, they added.

Aspergillosis Is Common Among COVID-19 Patients in the ICU

As many as 15% of patients with COVID-19 who are hospitalized in an intensive care unit (ICU) develop Aspergillus infection, according to a multinational study published in the CDC journal Emerging Infectious Diseases.

Damage to the lining of Airways from severe SARS-CoV-2 infection allows Aspergillus fungi to invade the tissue, according to a recent consensus guidance from the European Confederation of Medical Mycology and the International Society for Human and Animal Mycology. These secondary fungal infections can worsen patient outcomes, and they’ve raised concern about emerging evidence of Aspergillus resistance to voriconazole and isavuconazole, the first-line therapies.

The study provides new insights about the prevalence of coronavirus disease–associated pulmonary aspergillosis (CAPA) and potential risk factors. One of the study cohorts involved 519 patients with COVID-19 admitted from late February through May 2020 to 4 ICUs in the Netherlands and Belgium. Among 279 patients who could be classified based on the consensus guidance criteria, 2% had proven CAPA, 12% had probable cases, and 1% had possible CAPA. Corticosteroid use wasn’t associated with CAPA.

Among patients with underlying conditions, or “host factors,” like neutropenia or having had a solid organ transplant, 30% had CAPA compared with 16% of patients without such risk factors. Having HIV/AIDS, chronic obstructive pulmonary disease, or treatment with non–corticosteroid immunosuppressing drugs before ICU admission was linked with CAPA.

In a second cohort involving 304 patients in France, 10% of the 209 who could be classified had CAPA. About half of the patients with CAPA in both cohorts died. “Clinicians should be aware of CAPA and that underlying factors...can increase the risks,” the authors wrote. – Bridget M. Kuehn, MSJ

Note: Source references are available through embedded hyperlinks in the article text online.