



K16 An Impaired Driving Case Involving Xylazine

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Learning Overview: After attending this presentation, attendees will be aware of the appearance of xylazine in combination with fentanyl, cocaine, and other drugs in a specimen collected as part of an impaired driving investigation.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing insight into the rapidly evolving trends in drug use and abuse.

Objective: To describe an impaired driving case involving xylazine identified in a urine specimen in combination with fentanyl, cocaine, and other drugs.

Background: Xylazine is an alpha2 adrenergic agonist used in veterinary medicine for sedation, anesthesia, muscle relaxation, and analgesia. Recreational use of xylazine has been reported in Connecticut, Puerto Rico, Texas, and in Europe. Xylazine has been previously reported in cases involving heroin and fentanyl in Philadelphia, PA. Recently, xylazine in combination with fentanyl has also been identified in Palm Beach County, FL, and Ohio in drug seizure cases.

Method: A urine specimen was collected and submitted as part of an impaired driving investigation after a Breath Alcohol Analysis (BrAC). The urine specimen was screened using a basic extraction with scan Gas Chromatography/Mass Spectrometry (GC/MS) and a nine-panel Enzyme-Linked Immunosorbent Assay (ELISA) for barbiturates, benzodiazepines, buprenorphine, carisoprodol, cocaine/benzoyllecgonine, fentanyl, opiates, oxycodone/oxymorphone, and cannabinoids. All positive results were confirmed with GC/MS and/or Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

Results: The incident occurred at approximately 5:00 p.m. on a Saturday evening. The subject was a 29-year-old White male. Witnesses observed him running in front of cars in a parking lot and beating on vehicles. An officer in a marked patrol vehicle arrived on the scene and observed the subject behind the wheel making a couple of failed attempts to back into parking spaces. The officer made successive efforts to stop the suspect's vehicle by activating her emergency lights, air horn, and Public Address (PA) system giving verbal instructions to stop the vehicle, all of which were initially unsuccessful. The suspect finally stopped after the officer's second use of the air horn. When the officer approached the subject's vehicle on foot, the subject was sweating profusely, had red, glassy eyes, miosis, stuttering and excited speech, and could not stop fidgeting and flailing his arms. The subject had difficulty turning off the vehicle when requested, attempting to do so with the gear shifter and wipers switch before the officer advised him to use the ignition switch. Upon exiting the vehicle, the subject was unsteady on his feet. Field sobriety exercises were administered. During the horizontal gaze nystagmus task, the subject closed his eyes several times leaving them closed for several seconds while his head fell backward. Lack of smooth pursuit was observed in both eyes. During the other tasks, the subject had difficulty maintaining his balance and completing the tasks as instructed. A brown powder that field tested positive for heroin and a syringe was in the vehicle.

The BrAC did not detect ethanol. Cocaine, fentanyl, codeine, morphine, buprenorphine, xylazine, delta-9-carboxy-tetrahydrocannabinol, lidocaine, and tramadol were identified in the urine specimen. Benzoyllecgonine was indicated but not confirmed due to the presence of cocaine.

Conclusion: Recent submissions to the Palm Beach County Sheriff's Office Drug Chemistry Unit involving xylazine have included a counterfeit M30 oxycodone tablet containing methamphetamine, fentanyl and xylazine, and a tan powder containing heroin, fentanyl, and xylazine. Xylazine was tentatively identified by library match in both cases. This is consistent with previously reported cases involving concurrent detection of xylazine with heroin and fentanyl and indicates xylazine may be an additive in samples involving heroin and opioids.

Xylazine, Impaired Driving, Case Report