K4 Driving Under Impairment With Hydrocodone, Carisoprodol, Topiramate, and Phenytoin

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After attending this presentation, attendees will be familiar with the driving under impairment with prescription drugs, hydrocodone, carisoprodol, topiramate, and phenytoin in one case.

This presentation will impact the forensic science community by providing understanding of the effects and interactions of hydrocodone, carisoprodol, topiramate, and phenytoin. These drugs are common prescription drugs in United States and the combination of them will definitely impair the driver's performance.

A 38-year-old female was charged with DWI following a mid-morning traffic accident. Breath alcohol levels were negligible; however, she did not perform well in the Standardized Field Sobriety Tests (SFST) such as the one-leg stand (OLS) and the horizontal gaze nystagmus (HGN). In fact, the driver failed all tests administered at the scene: she could not walk in a straight line, balance on one foot, and underestimated elapsed times. In the HGN test nystagmus appeared at 40 degrees and her eyes lacked both smooth pursuit and convergence. Additionally body and eyelid tremors were noted. Substantial miosis of the driver's pupils (2.0mm) was recorded. Because of the driver's refusal to submit to having a blood sample taken, no further testing was performed; however, the driver volunteered that she had taken hydrocodone, carisoprodol, topiramate, and phenytoin pills at 6:30 a.m. the morning of the incident. Her stated medical problems included a herniated disk, hypertension, and epilepsy.

Based upon the drugs the driver claimed to ingest, her poor performance in the SFSTs is readily rationalized. Carisoprodol and hydrocodone play a very important role for the noted impairment. Carisoprodol use may result in side effects that include drowsiness, analgesia, euphoria, sedation, dizziness, muscle relaxation, anxiolysis, and somnolence. Meprobamate, a metabolite of Carisoprodol, produces impaired perception, sluggish reaction time, confusion, inattentiveness, slurred or thick speech, lack of balance and coordination, unsteadiness, and difficulty standing, walking, or exiting vehicles have also been noted in persons taking carisiprodol.

Hydrocodone is a narcotic analgesic and its effects on motor skills are well documented. These effects include: dizziness; lightheadedness; stupor; nausea; sweating; drowsiness; constipation; vomiting; and, euphoria. Topiramate and phenytoin are anticonvulsants used to treat patients suffering from epilepsy. The effects of topiramate include sedation, dizziness, ataxia, speech difficulty, and nystagmus. Overdose of topiramate can cause confusion and sluggishness. Additionally, phenytoin can cause horizontal gaze nystagmus (HGN), indicating that the result for the HGN test may produce false positives for patients taking phenytoin. Some common side effects such as dizziness, lethargy, and drowsiness might impair driving; however, most patients can tolerate them quite well.

Based upon on a Drug Recognition Expert's (DRE) opinion, she was under the influence of a central nervous system (CNS) depressant and a narcotic analgesic therefore impairing her ability to operate a motor vehicle. A jury convicted the defendant of driving while impaired with prescription drugs: hydrocodone, carisoprodol, topiramate, and phenytoin.

Driving While Impaired (DWI), Prescription Medicine, DRE

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