K21 Screening of Anabolic Steroids in Suspected DUI Drivers in Miami - Dade Florida Using ELISA Kits

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After attending this presentation, attendees will better understand the possible role that steroids may play in suspected DUI drivers. The goal of this presentation is to suggest a reliable screening method for the steroids boldenone and stanozole in biological samples.

This presentation will impact the forensic community by providing information on a reliable methodology for the screening of steroids in urine and blood and establishing the incidence of steroid abuse in the suspected DUI community of Miami-Dade County. This information is important to establish possible drug abuse patterns in our communities and help identify possible causation factors for suspected drug impaired driving cases.

Anabolic steroids such as boldenone and stanozolol are compounds related to testosterone. Steroids are reported as being abused by professional athletes to increase strength and muscle mass; however, there are reports of abuse amongst the general population. It is understood that high doses of anabolic steroids can cause aggressive behavior, insomnia, and irritability. Anabolic steroids have been also reported to cause other behavioral effects, including euphoria, increased energy, sexual arousal, mood swings, distractibility, forgetfulness, and confusion. These reported side effects may have an effect on driving skills and therefore may be compounds of interest in suspected DUI drivers.

The purpose of this study was to evaluate the occurrence, if any, of boldenone and stanozolol in suspected DUI drivers in Miami-Dade County. If a sample is recorded as positive then the “Drug Recognition Expert” evaluation was examined to correlate symptoms with drug use.

Blood and urine samples were submitted to the forensic toxicology lab for drug and alcohol screening. Boldenon and stanozolol were screened for in blood and urine by ELISA kits for all samples received in 2008. In addition, all blood and urine samples over the past 5 years that were negative in routine drug screens were analyzed. If positive, steroids were qualified and quantified in blood/urine by GC-MS. Case histories, including the DRE evaluation were collected and positive results were evaluated using this information.

Providing information on possible steroid abuse may explain some behavior and impairment seen in suspected DUI drivers when all other toxicological screening is negative. This information is important to determine potential drug abuse in our community and help identify possible causation factors for suspected drug impaired driving cases.

Anabolic Steroids, ELISA, Driving

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