



## Pathology/Biology Section - 2013

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### **G57 Sudden Cardiac Death of a High- Performance Skater**

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After attending this presentation, attendees will understand how the misuse of Over the Counter (OTC) anabolics alter the cardiac architecture, and is a predisposing factor for sudden death. Another important fact is that the investigation of prior history associated with an autopsy-oriented procedure led to establishing an association between inappropriate use of these drugs with a viral infection, which led the deceased into a lethal pathophysiologic event that could happen again under the same circumstances. Since sudden deaths of athletes commonly involve drug abuse, a toxicology screening was ordered for fluids like blood or urine of the deceased, with negative results. The histopathology results were reviewed by departmental forensic pathologists and academic peers of an associated teaching hospital. It is believed that this case of accidental death was never reported.

This presentation will impact the forensic science community by understanding how multidisciplinary research collaboration involving the drug manufacturer and the system of distribution, toxicologists, and forensic medical team was able to reconstruct the chain of events in an appropriate manner. Determining the factors that influenced this unusual death was difficult at first, but the main purpose in determining the manner of death was because it created a controversy between the authorities who removed the corpse from the scene, the family, and the forensic pathologists because the absence of significant medical history, even the use of narcotics or anabolic illegally manufactured were considered. So far, the manner of death has not been determined. The products involved are OTC and do not require a medical prescription for sale. Health systems in Colombia, through an entity called the INVIMA regulator for the distribution of drugs (equivalent to the FDA), have not been given a decision on restrictions on the use and sale of such anabolic in gyms, pharmacies, and sports shops.

Another sudden cardiac death case was reported in a high-performance skater who suddenly collapsed during a training session. This report examines the medical history, the chain of events, and pathogenetic mechanisms leading to death. Medicolegal aspects of the case are discussed after available literature is reviewed. There are a number of articles reporting many cases of sudden cardiac death in athletes who use performance-enhancing drugs, but there are no reports regarding this type of death where the use of OTC anabolics is involved as a contributing factor to death.

The last unusual sudden death case presented is associated with the consumption of OTC anabolics. This case was studied and used as an example of the practical application of research and multidisciplinary collaboration for the discovery of an unusual death. It is recommended that forensic investigators are familiar with these types of drugs which are common among athletes and the pathogenesis of this way of death that may have involved an inadequate response from a heart changed because of a viral infection.

**Sudden Death, Cardiomyopathy, Anabolic Steroids**