



Pathology Biology Section – 2009

G119 Sudden Deaths Associated With Sexual Activity

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Attendees will review of non-homicidal sudden deaths associated with sexual activity that occurred in Harris County, Texas, from January 2004 until the present. The goal of this presentation is to describe the epidemiological characteristics, autopsy findings, and toxicology results in this group of decedents.

This presentation will impact the forensic community by describing a population of decedents that commonly present to medical examiner and coroner's offices, including a description of the relatively high prevalence of substance abuse in this population.

Because deaths associated with sexual activity often occur suddenly and outside of the care of a physician, they are frequently reported to the local medical examiner or coroner's office. The extent of the resulting death investigation may range from no additional investigation to a full autopsy with histologic and toxicologic evaluation, depending on the circumstances of the particular case, office-specific guidelines, and the judgment of the individual pathologist/investigator. To further characterize this group of decedents and thereby aid in the investigation of similar deaths in the future, a review of sudden deaths associated with sexual activity was performed.

A review of cases from the Harris County Medical Examiner's Office from January 2004 until the present identified 35 cases of sudden death associated with sexual activity (excluding homicides). These cases fell into three broad categories: (1) collapse occurring either during or immediately around the time of sexual intercourse (22, 62.9 percent), (2) individuals found unresponsive in adult-oriented establishments (theaters, video booths, etc) (11, 31.4 percent), and (3) cases of autoerotic asphyxiation (2, 5.7%).

Autopsies were performed in 29 of 35 (89.7%) of all cases and toxicology testing (including at least a screen for stimulants) was performed in 25 of 35 (71.4%) of all cases. The population was overwhelmingly male, with a male to female ratio of 10.7 to 1. The mean age was 57.6 years. Atherosclerotic and/or hypertensive cardiovascular disease represented the most common natural cause of death, and was identified in 29 of 35 (82.9%) of all cases. The mean heart weight was 543.9 grams among natural deaths and 490.0 grams among deaths attributed to substance abuse.

Deaths were attributed to substance abuse in nine of 35 (25.7%) of all cases and nine of 25 (36.0%) of cases in which toxicology testing was performed. Of these, only five of nine (55.6%) had a known history of substance abuse. Among cases in which toxicology testing was performed, substance abuse-related deaths occurred in five of 14 (35.7%) of individuals having sexual intercourse and four of nine (44.4%) of individuals found in adult-oriented establishments. Cocaine was the most commonly identified drug of abuse, followed by methamphetamine and methylenedioxymethamphetamine. One case of inhalant abuse (ethyl chloride) was identified. Atherosclerotic and/or hypertensive cardiovascular disease was identified in six of nine (66.7%) of deaths attributed to substance abuse.

The high prevalence of cardiovascular disease that researchers observed is consistent with previous studies of myocardial infarction and/or sudden death associated with sexual activity. Less recognized by the existing medical literature is the significant prevalence of substance abuse in this population, including those decedents with no known history of drug use. The results of this review suggest that a history of sudden death in association with sexual activity warrants at least a toxicologic analysis for stimulants in order to classify accurately the cause and manner of death, even in the absence of a known history of substance abuse.

Sudden death, Sexual, Toxicology