



Pathology & Biology Section – 2004

G42 Causes of Death in Chronic Alcoholics: A Comprehensive Retrospective Analysis of Medical Examiner Cases

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After attending this presentation, attendees will understand the necessity for complete autopsy examination, scene investigation and toxicology in the evaluation of individuals with chronic alcoholism. The spectrum of causes of death in individuals with chronic alcoholism.

This presentation will impact the forensic community and/or humanity by illustrating the spectrum of causes of death in chronic alcoholics and the need for complete death investigation in such deaths.

Acute and chronic alcohol abuse is a common issue faced by medical examiners and death investigators. The morbidity and mortality of chronic alcoholism is well-documented in the hospital population, but little data is available describing those who die outside of the hospital or without medical care. The teaching/dogma in the forensic pathology community is that chronic alcoholics suffer certain injuries, such as subdural hematoma, much more frequently than the general population, though little is published in the scientific literature to support these claims. This study was undertaken to assess the causes of death in chronic alcoholics in a large urban area over a seven year period.

The Miami-Dade County Medical Examiner Department case file computerized database was retrospectively searched, using the keywords "alcohol" and "heavy," and "alcohol" and "abuse" in the history field, and "alcohol" or "ethanol" in the cause of death fields, for the years 1996 to 2002, inclusive. Inclusion criteria were: performance of a complete autopsy; a history of chronic alcohol abuse or scene evidence suggesting the same; acute alcohol use prior to death; and/or alcohol caused or contributed to the death after complete autopsy and toxicology examination. Case files were reviewed to ensure the cases met the inclusion criteria.

During this seven year period, 17,463 autopsies were performed at the Miami-Dade County Medical Examiner Department. 1,457 cases were identified that met the above inclusion criteria, and were broadly grouped into two categories, those with a history of chronic alcohol abuse and/or circumstances of chronic alcohol abuse or acute use (1297 cases, 89%), and those with no history of chronic alcohol abuse or circumstances to suggest alcohol abuse or acute use (160 cases, 11%). The cases were also categorized by the cause of death: blunt injuries (159, 11%), drowning (65, 4%), polydrug intoxication with alcohol present (149, 10%), polydrug intoxication without alcohol present (48, 3%), other single drug intoxication (58, 4%), other alcohol related causes, such as pancreatitis, bleeding varices, and liver failure (501, 34%), and natural diseases with chronic alcohol abuse as a contributory condition (104, 7%). Gunshot wounds, stabbings and hangings each accounted for 1% or less of the cases. The most common cause of death in both those with and without history of alcoholism fell into the "other alcohol related deaths" category (438/1297, 34% in those with history; and 63/160, 39% in those with no history). Twenty-one percent of those with a history of chronic alcohol abuse died as a result of a natural disease unrelated to alcohol abuse. A total of 19 cases were identified where the cause of death was related to a subdural hematoma (3 in the group without a history of alcohol abuse and 16 in the group with a history of alcohol abuse), for an overall incidence of roughly 1% in our study population. Within the chronic alcohol abuse group, pedestrians struck by vehicles accounted for more than those killed in a motor vehicle crashes (23 versus 18).

This retrospective study of medical examiner cases shows that those who suffer from chronic alcohol abuse are more likely to die from a non-natural process, such as trauma, drug intoxication or drowning, than they are to die from a natural complication of abusing alcohol. A thorough death investigation, including scene investigation, autopsy and toxicology is necessary to clearly establish the cause and manner of death in individuals with a history of chronic alcohol abuse.

Cause of Death, Alcohol Abuse, Autopsy