



Pathology/Biology Section - 2013

G74 Jay Dix Memorial Bonus Day

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After attending this presentation, attendees will learn how and why deaths related to multitude of topics occur. Attendees will learn a systematic approach to the evaluation of such deaths that can easily be implemented in their daily practices.

This presentation will impact the forensic science community by receiving a comprehensive review of what causes and contributes to different types of deaths. Attendees will be able to systematically evaluate deaths in which the previously specified topics that may have played a role in their daily practices.

A proper medicolegal death investigation is a multidisciplinary process that often involves non-medical personnel as well as medical professionals. This annual series of discussions is intended to provide the non-forensic pathologist forensic scientist a comprehensive basic review of selected topics in forensic pathology in order to increase familiarity and understanding and enhance inter-discipline communication.

This year's presentations will discuss the investigation of infant deaths and deaths related to electrocution, asphyxia, sports and recreation, and suicide.

Electricity is a ubiquitous entity in our daily lives. Some of it is intentionally generated to provide power and some of it originates as a force of nature (lightning). Interaction between humans and electricity is common and typically has no untoward effects. However, under some conditions this interaction may result in morbidity and/or mortality. Multiple causes, mechanisms, and contributory factors play a role in injury and deaths involving electricity. Understanding and evaluating injuries and deaths in which electricity may have played a role requires basic knowledge of electricity and how it affects various biological vital functions. Recognition of injuries and deaths caused by electricity is particularly important because of implications regarding the safety of others. This presentation will provide a comprehensive review of these issues.

Human life requires the uptake and utilization of oxygen along with the release of metabolic waste. Failure of these processes leads to asphyxia. There are numerous entities—mechanical and chemical—that can cause asphyxia through a variety of mechanisms, present in a wide range of scenarios and that can be associated with a broad range of physical findings. Proper evaluation of these deaths requires knowledge of the various entities that can cause asphyxia, mechanisms through which these agents affect physiological function, scenarios under which these deaths occur and factors that contribute to these deaths. This presentation will comprehensively discuss the investigation of death in which asphyxia may have played a role.

There are multiple causes, mechanisms, and contributory factors that can play a role in deaths that are temporally related to participating in and, occasionally, while being a spectator at sporting or other recreational activities. Understanding these deaths requires understanding of the physical requirements to perform particular activities, susceptibility of particular diseases to stresses associated with particular activities, effects of various chemical and/or biological agents that may be taken to enhance performance and physical injuries associated with particular recreational activities. This presentation will provide a comprehensive review of these issues in the context of investigating deaths that occur in relation to sports/recreational events. Understanding factors that are involved in deaths occurring in these circumstances also helps in instituting appropriate safety measures to protect participants and spectators.

The intentional termination of one's own life, suicide, can be accomplished in many ways, some overt and others covert. The accurate recognition of suicide has important implications for the decedent's survivors, estate, and others such as law enforcement. Unlike most other manner of death determinations, an assertive determination of the decedent's intent is fundamental in certifying a death as suicide. In addition to accurately determining the cause and manner of death, the proper investigation of a suicidal death may offer insight into the motivation for the death and provide information in the development and implementation of preventive strategies. The investigation and interpretation of findings in suicidal deaths will be comprehensively discussed.

The death of an apparently healthy infant is a devastating event for the infant's survivors and is accorded significant attention by society. Infant death may be the caused by a wide variety of diseases and injuries, involve a variety of mechanisms, and can be natural, accidental, or homicidal. External and/or internal evidence of disease or injury may be lacking. Accurate recognition of the cause, mechanism and manner of death has important implications for the survivors, other interested investigative and health agencies and society in general. Recognition of factors involved in sudden unexpected infant deaths can help in enhancing the safety of other family members and serve as a basis for formulating death prevention strategies. The investigation and interpretation of findings in sudden unexpected deaths involving infants will be discussed.

Sudden Death, Death Investigation, Forensic Pathology