



## Pathology Biology Section – 2006

### G107 “Homicide by Heart Attack” - An Unusual Pediatric Death

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The goals of this presentation are to illustrate and discuss applicability of previously published criteria for homicide by sudden cardiac death in pediatric cases. An unusual case of fatal child abuse will be presented as an example.

This presentation will impact the forensic community and/or humanity by demonstrating how the possibility of underlying potentially fatal natural disease must be considered in instances where multiple blunt trauma in a deceased child is unassociated with internal injuries of sufficient severity to explain the demise. Although the current example entails obvious natural disease, the presence of more subtle abnormalities should diligently sought in such cases. If a temporal correlation of abuse (with non-fatal injuries) with death can be documented by investigation, the manner of death may be properly classified as homicide.

This 17-month-old Hispanic female child had a history of various types of abuse, including blunt trauma as well as neglect. The mother was the reported perpetrator, and according to family members, this child was targeted because the mother had doubts as to her maternity (she speculated that the hospital had sent her home postpartum with somebody else's child).

On the date of death the mother phoned from home to her brother-in-law and initially indicated that this child had “fallen from the bed.” Over the next several minutes she phoned her sister as well, made several other incriminating statements indicating that in fact she had “hit” the child, and even admitted to her sister “I killed the baby.” The brother-in-law immediately rushed to her house, while simultaneously phoning emergency medical services. He arrived at the house at nearly the same time as ambulance personnel. Paramedics found the child unresponsive. Aggressive resuscitative efforts were unsuccessful and the child was pronounced dead upon arrival to the emergency room. As paramedics were entering the house the mother rushed out, drove to the local day care, retrieved her other children and fled to Mexico. The mother and siblings have not been returned to this country, despite multiple warrants.

The abusive nature of the child's injuries was undeniable. Contusions of various ages were distributed widely over all body surfaces, including the scalp, face, thorax, and extremities. Pressure type contusions were on the pinna. Multiple contusions were distributed across the mucosa of the lower lip, and a gaping laceration undermined the upper frenula separating the upper lip from the alveolar ridge. Internal findings were less impressive. In fact, no internal injuries were found. Furthermore, no natural disease was grossly evident. The microscopic appearance of the heart was strikingly abnormal; myocarditis was florid, with abundant lymphocytic inflammation, with intramyocyte edema and myocyte necrosis.

To paraphrase Davis's criteria for “homicide by heart attack,” 1. the threat must be severe enough to be considered as a threat to the life of the victim; 2. the victim should perceive the incident as a threat to their life; 3. the threat must be an emotionally charged event; 4. death must occur within the emotional response period during or immediately following the threat; and 5. cardiac disease associated with predisposition to arrhythmia should be documented, although no acute cardiac change (ruptured plaque for example) need be found (J Forensic Sci 23:384; 1978). Although Davis's criteria have been applied primarily to instances of a threat without physical contact, more recent literature (J Forensic Sci 49:598; 2004) expands the criteria to include threats with actual physical contact, but the inflicted injuries are insufficient to explain death. Therefore, the investigative and autopsy findings in this case fit the published criteria for homicide by sudden cardiac death. Accordingly, the cause of death was classified as “sudden cardiac death (myocarditis) associated with multiple blunt force injuries.” The manner of death was classified as homicide. Implications for similar types of pediatric cases will be described in the presentation.

**Child Abuse, Myocarditis, Homicide by Heart Attack**