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Injuries of Fatal and Non-fatal Suffocation in Family Violence Cases



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Suffocation is a mechanism of injury and death for children and adults, where the pattern of injuries may be very difficult to detect, and the injured victim is often not able to give a story about the injury. Suffocation also tends to occur in certain predictable relationships between the perpetrator and victim. Suffocation may be found as a simultaneous event during a strangulation assault, but for infants and frail dependant elders it is sometimes seen as the only mechanism of assault. Data has been collected on the frequency of this mechanism of injury. Cases will be reviewed for infants and at-risk elders, and there will be a discussion of the injury patterns seen when suffocation is used simultaneously with strangulation during an assault. Alaska, like many other states, has worked through the language of suffocation injury in developing specific state criminal statutes. This workshop will review the data and evidence behind suffocation assault cases, but also focus on suffocation as it occurs for infants and dependent elders.

OBJECTIVES:

1. Review the criminal statutes on suffocation in intimate partner relationships, and learn to recognize the medical evidence that may be found in these cases.
2. Learn to recognize some of the subtle medical findings that may indicate criminal suffocation assault as the mechanism of death for infants, dependant elders, and battered women, and learn the scene investigative clues that help distinguish a criminal suffocation assault, from an accidental suffocation.

INFANTS

Proof of child abuse, whether fatal or not, requires expert medical testimony. In the past, testimony from non-medical welfare or social workers, police officers, or school teachers has served in substitute for medical evidence. Now, proof of child abuse depends on expert medical opinion; and probably also requires physical evidence to include at least photographs of the injuries. Defense arguments often center on the potential for the injuries to have occurred accidentally, in falls or play-mishaps in the home.[1, 2, 3, 4, 5, 6] Comparison of blunt force injuries to alleged weapons is a standard procedure for proof of physical child abuse. Unfortunately, there are cases of serious -- even fatal -- child abuse where there is no external evidence of trauma. "Subtle child abuse," a term coined in 1980 by Zumwalt and Hirsch for these inconspicuous cases, now includes all of the following.[7]

1. **Nutritional abuse ("failure to thrive")**
2. **Suffocation (smothering)**
3. **Shaken infant syndrome**



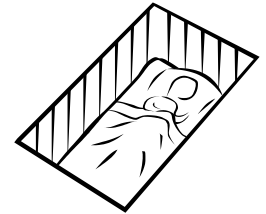
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4. Munchausen's syndrome by proxy

Suffocation or smothering as a fatal assault is virtually indistinguishable from other natural (i.e. SIDS) and accidental (i.e. drowning, entrapment in bedding, aspiration of a toy or food) forms of asphyxial death.[8, 9, 10, 11, 12, 13] Although careful scene investigation may facilitate determining the mechanism of asphyxiation in some cases, the majority of asphyxial deaths remain undetermined.[14, 15, 16, 17] Passively ingested cocaine has been detected in otherwise completely normal-appearing dead infants.[18] Much public attention



has been directed toward a 1992 statement by the American Academy of Pediatrics that Sudden Infant Death Syndrome may be caused by face-down sleeping posture of infants in cribs.[19, 20, 21, 22] Since 1993, maternity hospitals have taught new parents to place infants face-up in cribs, and there has been a dramatic decline in SIDS rates nationwide. Keep in mind that other obscure factors have also been alleged to cause sudden asphyxial death in infancy. Childhood vaccines--most recently hepatitis B vaccine--have been alleged to cause sudden asphyxial deaths, and this claim has been categorically disproved with scientific study.[23] Smothering by overlying when adults sleep with infants is a very real and frequent event. Intoxication and obesity increase the risk of overlying.[24]



Suffocation, by obstruction of breathing, can occur as a component of homicidal assault, and can also occur by accident. Covering the mouth and nose by hand, or using a pillow, plastic bag or other object, may result in death by anoxic encephalopathy. Homicidal suffocation is particularly implicated in cases where the victim is especially vulnerable, such as babies, the diseased elderly, or adults significantly impaired by intoxication with alcohol or drugs.[25, 26, 27, 28, 29, 30, 31, 32]

Battered Women

In domestic violence relationships, strangulation and suffocation assaults are a demonstration of the abuser's exercise of power and control .[34-42] Strangulation is an escalation of dangerous behavior, associated with increasing risk of serious injury or death.[43, 44, 45] New and evolving state penal statutes, and risk assessment screening tools, are targeting strangulation and suffocation behavior to better protect victims of domestic violence.[46, 47, 48, 49, 50] Most of the available data on the relationship between strangulation and domestic violence comes from studies that include victims of all ages. Data on suffocation, particularly in domestic violence situations, is extremely limited. This may be because the event is difficult to detect and even more difficult to prove. One state, Alaska, has incorporated "suffocation" into its criminal statutes.[50]



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As a general principle for suffocation assaults of battered women, these incidents commonly occur simultaneously with a strangulation assault. That is, both the suffocation and the strangulation are occurring at the same time, or at least as a component of the same interval of assault. The most typical scenario is for the victim to be on her back on the bed or floor, with the assailant sitting on top of her, while the assailant is strangling her. The pressure of his body down onto her chest or abdomen reduces her ability to expand her chest wall during inspiration thereby producing a “positional asphyxiation.” Other variations of these combined contacts are possible, including using his hand to cover her mouth to prevent screaming, but in that act also obstructing her breathing. Duct tape over the mouth and/or nose, again sometimes to prevent the victim from screaming, is another type of suffocation.[51] In aggregate, the suffocation changes the typical injury pattern observed by the concomitant strangulation assault, in that the suffocation can induce petechiae in a pattern not expected from strangulation alone.[51] In singular strangulation assault, the petechiae will be only above where the force was applied to the neck.[36, 44] In suffocation, the petechiae can be throughout the body, and especially over the visceral surfaces of the internal organs, like the epicardium of the heart and the pleura of the lungs, just like with children who suffocate.[19, 20, 32, 51] In one study of the effect of suffocation and strangulation on body temperature after death, Demierre et al reported that suffocation and strangulation can result in an unexpected postmortem hyperthermia, and this may be a useful indicator of the mechanism of death in cases where that mechanism might otherwise be undetected.[52]

Dependent Elders

Suffocation homicide of dependent elders is a topic that deserves special separate discussion, owing to the fact that these incidents are so difficult for field death investigators to detect. In general, elder abuse goes undetected. For every one case of elder abuse or neglect that is reported, five go unreported.[53] Safarik, et al pointed out that recognition of the types of offender behaviors can improve detection of crimes in which the victim’s advanced age may mask the actual cause of death.[54] One purpose for separately discussing elder strangulation cases is to provide death scene investigators with information that may help direct decisions about whether an autopsy is warranted, when the scene investigation otherwise simply indicates advanced age, complex natural disease, and little or no external evidence of violent crime.

The finding that strangulation (as the cause of death) increases in frequency with the victim’s age was reported by Safarik, et al, in their study of elder sexual assault homicides.[54] This finding is surprising given that strangulation actually becomes more difficult to detect in elder death investigations.[54, 55] Strangulation and suffocation, which also occur at a greater frequency in domestic violence relationships [3], may be fatal without external evidence of injury



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on the body [4, 12], and cases of strangulation or suffocation occurring in medically-disabled elders will be missed unless investigators develop suspicion at the scene.[21, 54]

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