H48 Bathtub-Related Deaths

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After attending this presentation, attendees will better understand the epidemiology and circumstances of bathtub-related deaths. Attendees will also learn about the evaluation of scalp lacerations and how these wounds correlated with deaths due to falls in bathtubs.

This presentation will impact the forensic science community by adding new knowledge regarding injuries sustained in bathtub-related deaths, with emphasis on the correlation with lacerations of the scalp.

This presentation seeks to answer the questions that were of importance in a recent high-profile case in which court testimony centered around the presence and orientation of scalp lacerations as an indication of a fall in a bathtub: Do lacerations of the scalp occur at all in bathtub-related drownings and, if so, is a certain shape of the wounds more frequent?

Determining the cause and manner of death in a bathtub death can be difficult. This study grew out of questions in a high-profile death in which a woman was found dead in a bathtub. This study describes the epidemiology and circumstances of bathtub-related deaths in Sweden. In reference to this case, traumatic head injuries, including the orientation of the scalp laceration, were highlighted. Searches in the database of the National Board of Forensic Medicine in Sweden were conducted for the time period 2007 through 2013. Cases in which the decedent was found in a bathtub, jacuzzi, or hot tub were included. Deaths in showers were also included but were analyzed separately.

A total of 381 cases were identified — 365 bathtub-related deaths and 16 shower deaths. The most common cause of death was, as expected, drowning, followed by intoxication. Suicide was the most common manner of death, but all manners of death were encountered, including two homicides. The prevalence of severe traumatic injuries (AIS>3) was low and was most prevalent among suicides from a violent method, such as gunshot or massive lacerations. A total of six cases had a laceration in the scalp similar to that described in the present case, and four of these cases were bathtub drownings. In three of the four cases, it is plausible that head trauma may have reduced the person's state of consciousness and thus contributed to the drowning and the fatal outcome; however, in neither case was the laceration stated as a (contributing) cause of death by the forensic pathologist. Three of the injuries were located around the bony structures of the right eye (the wounds were transversal, oblique, and vertical), one was on the medial surface of the left ear (vertical), and two were on the back of the head, just right of the inion (oblique and transversal).

In conclusion, all manners of death are possible in a bathtub-related death; however, as expected, suicide was the most common manner of death and drowning the most common cause of death. The prevalence of severe traumatic injuries is low and, when present, it is usually in a suicide from a violent method, such as gunshot or massive lacerations. Lacerations of the scalp in a bathtub drowning *do* occur in various orientations, but the impact of these upon the fatal outcome needs to be explored further.

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