



Pathology Biology Section – 2009

G106 Suicide by Hanging in Harris County, Texas

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After attending this presentation, attendees will have comprehensively reviewed the features of suicidal hangings, including demographic characteristics of the decedents, frequency and types of injuries identified at autopsy, ligature characteristics, and scene investigation information. This review will provide the attendee with a reference base for common and uncommon findings in suicidal hangings.

This presentation will impact the forensic community by providing insight into the case findings and epidemiological characteristics of suicidal hangings presenting to the Harris County Medical Examiner's Office from the large diverse population of Harris County, Texas.

Suicidal hangings comprise 19% (320) of the 1676 suicides that occurred in Harris County, Texas from January 1, 2004, through June 30, 2008. Hanging was the second most common method of suicide after firearm wounds. An upward trend in the total number of hangings was recorded over this four and one-half year period, with 51 hangings occurring in 2004, 73 in 2005, 71 in 2006, 81 in 2007, and 43 in the first half of 2008. Although the total number of suicides in Harris County also increased over this period (from 298 in 2004 to 424 in 2007), the percentage of hangings compared to total suicides increased, with hangings comprising 17.1% of the total suicides in 2004 and 21.8% of the total suicides in the first half of 2008. Accounting for the approximated 7% population increase in Harris County from 2004 through 2007, the actual rate of suicidal hangings increased slightly over this period, from 1.3 per 100,000 people in 2004 to 2.1 per 100,000 in 2007, as did the rate of total suicides, from 8.1 per 100,000 in 2004 to 10.8 per 100,000 in 2007.

The majority of the decedents who hanged themselves (81%) were male, a trend that is common for other methods of suicide. Female decedents comprised 19% of the suicidal hangings and 24% of the total number of suicides in the period examined. The ages of decedents hanging themselves over the period studied ranged from 10 to 80. Children were over-represented in the hanging category when compared to total suicides. Ten percent of the decedents hanging themselves were under the age of 18, compared to 3.8% of the decedents committing suicide by all methods. Senior citizens were under-represented. Decedents over the age of 65 comprised 2.5% of suicidal hangings compared to 11.5% of all suicides in the time period studied.

The majority of decedents who hanged themselves were Caucasian (54.4%), followed by Hispanic persons (31%), African-American persons (10.1%), and persons of other race/ethnicity (4.5 %). The breakdown of ethnicity for people dying by suicide by all methods was similar, with 68% white, 18% Hispanic, 11% black, and 3% other race/ethnicity. In suicidal hangings as well as suicide by all methods, white persons appear to be over-represented when compared with the population breakdown of Harris County, in which approximately 37% of the population is white.

Of the 320 suicidal hangings examined, 260 (81%) took place in the decedent's residence or property immediately surrounding the residence (yards, garages, utility sheds, and other outbuildings). Of the remaining 19% of cases, the more common locations of the hangings included parks, fields, or wooded areas (15 cases), jails or other correctional facilities (13 cases), places of business (11 cases), and motels or hotels (8 cases). Hanging was the only method of suicide used by incarcerated persons over the four and one-half year period studied. Approximately one-fifth of the decedents (62 cases) were transported from the scene of the hanging and received medical care prior to being pronounced dead. The remaining four-fifths of the decedents were pronounced dead at the scene of the hanging.

The types and frequency of injuries of the internal neck structures identified at autopsy such as hemorrhage of the neck musculature, fractures of the hyoid bone, and fractures of the tracheal and laryngeal cartilages as well as injuries of the spine will be reviewed in detail. In addition, the various types of ligatures recovered, ligature positioning, and positions in which the decedents hanged themselves will be discussed. The prevalence of factors such as previously diagnosed mental illness, physical illness, and prior suicide attempts in decedents who hanged themselves will also be examined.

Hanging, Suicide, Epidemiology