



Pathology Biology Section – 2006

G87 Handgun to the Head: Suicide Trends in Northern Virginia

Erin E. Falconer, MFS, Danielle L. McLeod, MFS, and Todd M. Luckasevic, DO*, Northern Virginia Office of the Chief Medical Examiner, 9797 Braddock Road, Suite 100, Fairfax, VA 22032

The goal of this presentation is to identify trends present in suicidal handgun wounds to the head.

This presentation will impact the forensic community and/or humanity by providing information on the findings associated with suicidal handgun wounds to the head. Emphasis will be focused on the location and characteristics of the wound, caliber of the handgun, result of gunshot residue (GSR) testing, presence of a suicide note, and history of mental illness/life event.

Introduction: Suicide is one of the most important public health issues in the United States. Suicide represents the eleventh leading cause of death in the United States. Nearly 20% of the cases autopsied at the Northern Virginia Office of the Chief Medical Examiner in Fairfax, Virginia are ruled suicide. Suicide rates for this country have been relatively stable over the past decade with approximately 10 suicide deaths per 100,000 people. The most common method of suicide in the United States is with the use of a firearm.

Materials and Methods: This is a retrospective review of case files from the Northern Virginia Office of the Chief Medical Examiner in Fairfax, Virginia. Inclusionary data for this pilot study included the cause of death as gunshot wound to the head with a handgun as the lethal device and the manner of death ruled as suicide for autopsy cases from the years 2003 thru 2004. A total of 320 suicides were autopsied during this 2-year study period. Of these 320 suicides, 113 (35%) were due to handgun wounds to the head. These 113 cases were reviewed for the following information: the location and characteristics of gunshot wounds, the caliber of weapon, underlying psychiatric illness/depression or life event, GSR results, the presence of alcohol, the presence of a suicide note or past ideations/attempts, and the demographics of the decedent. The case information was organized into a spread sheet and the data was analyzed for any trends or interesting correlations.

Results: Between the years 2003 and 2004, the Northern Virginia Office of the Chief Medical Examiner investigated 320 suicides. Of these 320 suicides, 113 (35%) were caused by shooting oneself in the head with a handgun. Males comprised 87% (98), while females accounted for the remaining 13% (15). Caucasians accounted for 87% of the cases. Ethanol (>.02% by weight by volume) was present in postmortem toxicology samples in a total of 39 (35%) of the decedents. Gunshot residue (GSR) was present in 61 (87%) out of 70 samples analyzed. Suicide notes were present in 44 (40%) cases. The location of the gunshot wound in decreasing frequency: right temple 61 (55%), intraoral 34 (31%), left temple 8 (7%), forehead 6 (5%), submandibular 4 (4%), and back of head 1 (<1%). Two cases involved multiple gunshot wounds to the head. A .38 caliber revolver was the most common handgun used. There was no known or documented history of depression, psychiatric illness or life event in only 7 (6%) of the decedents. Finally, 6 (5%) of the decedents had a previously documented suicide attempt.

Conclusions: This pilot study emphasized the role handguns play in suicide. In the years 2003 thru 2004, thirty-five percent of the suicides in Northern Virginia were due to handgun wounds to the head with the right temple region being the most common location. Interestingly, when handedness of the decedent was known and reported, only 3 gunshot wounds of entry were located on the opposite side of the decedent's dominant hand. Also, 2 cases involved multiple (2) gunshot wounds to the head. There was only 1 case where the gunshot wound of entry was located to the back of the head. GSR was positive in 87% and a suicide note was present in 40% of the cases. Finally, only 7% of the cases had no known/reported history of depression, psychiatric illness, or life event.

Handgun, Head, Suicide