

PAPER**PATHOLOGY/BIOLOGY**

Amy E. Austin,^{1,2} B.Hlth.Sci.; Corinna van den Heuvel,¹ Ph.D.; Karen Heath,² F.R.C.P.A.; John D. Gilbert,² F.R.C.P.A.; and Roger W. Byard,^{1,2} M.D.

Recent Firing Range Suicides in South Australia

ABSTRACT: Two cases are reported from South Australia, where deaths occurred that were due to single self-inflicted gunshot wounds to the head in individuals who were visiting indoor firearm ranges. Case 1: A 54-year-old man visiting an indoor firing range placed a .357 magnum handgun to his head and fired one shot. Case 2: A 23-year-old woman who was being instructed in firearm usage at an indoor firing range placed a 9 mm handgun to her head and fired one shot. In both cases, deaths were due to cerebral laceration with skull fracture. Firing ranges may be utilized by individuals who are seeking weapons for suicide attempts, and suicide may be successfully undertaken at such locations even while a victim is under direct supervision. In jurisdictions, where firearm ownership is strictly legislated, it may be that clubs can inadvertently provide access to firearms for this type of activity.

KEYWORDS: forensic science, firearms, suicide, method, firing range, legislation

Suicide, or the deliberate termination of one's life, represented the 14th leading category of death in Australia in 2008, with 23,254 suicides registered in the 10-year period from 1997 to 2006 (1,2). The majority of cases (76%) were hangings or poisonings. In Australia, suicide by firearm is much less common than in countries such as the United States, with only 8% of Australian suicides occurring in this way (2). It has been suggested that the lower numbers of firearm suicides and homicides in Australia are in part a reflection of reduced availability that is due to strict legislative requirements for gun ownership and use (3). As the methods used to commit suicide vary depending on availability (4), two cases in South Australia of suicide in firing ranges within the last 3 years may demonstrate a previously unreported local situation where access to firearms may facilitate gunshot suicide.

Case Reports

Case 1

A 54-year-old man signed in as a visitor to an indoor firing range in Adelaide and, while firing a .357 magnum handgun at a target under supervision, placed the gun to his head and fired one shot. The incident was filmed on closed circuit surveillance video. He died soon after in hospital. At autopsy, a near-contact gunshot entry wound was present in the right temple with an exit wound in the left temple. A hemorrhagic projectile tract was present through both cerebral hemispheres with associated comminuted fractures of both anterior cranial fossae. There were no other injuries present, and there were no underlying organic diseases that could have caused or contributed to death. Toxicological evaluation revealed a

therapeutic concentration of the antidepressant drug venlafaxine. Death was due to a self-inflicted gunshot wound to the head.

Case 2

A 23-year-old woman who was being instructed in firearm usage at the same indoor firing range in Adelaide placed a 9 mm handgun to her head and fired one shot. She died soon after in hospital. The victim had a past history of previous suicide attempts and self-harm and had been discharged from hospital following a drug overdose on the morning of her death. At autopsy, a contact/near-contact gunshot entry wound was present in the right temple with an exit wound in the left parietal region. A hemorrhagic projectile tract was present through both cerebral hemispheres with an associated hinge fracture of the base of the skull, blowout fractures of the orbital roofs, and diastases of the coronal and lambdoid sutures. There were no other injuries present, and there were no underlying organic diseases that could have caused or contributed to death. Toxicological evaluation revealed a therapeutic concentration of diazepam. Death was due to a self-inflicted gunshot wound to the head.

Discussion

Firearm suicides vary greatly in incidence depending on the community or country surveyed. While only 8% of suicides in Australia are committed using guns, the percentage varies from over 50% to 76% in various parts of the United States (2,5,6). Certain countries in Europe also have lower numbers of firearm suicides, a trend that has been related to strict gun control laws (7). Death rates due to firearms have been reported to be five to six times higher in the United States than in other countries of a similar socioeconomic level, with the overall rate of firearm deaths in the United States reaching 14.24 per 100,000 in 1998 (8),

¹Discipline of Anatomy and Pathology, The University of Adelaide, Frome Road, Adelaide, SA 5005, Australia.

²Forensic Science SA, 21 Divett Place, Adelaide, SA 5000, Australia.

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compared to a mere 0.12 per 100,000 in Australia in 2005 (9). In the 1980s, 50% of the American population owned approximately 90 million firearms (10).

Availability has been cited as a major factor in determining the method of suicide that is chosen. For example, decreasing numbers of firearm suicides have been noted in the elderly and in women in South Australia (11,12), a trend that has been related in other Australian states to a national firearm amnesty and gun buy-back scheme (13). An Austrian study of firearm suicides also demonstrated an association with an increase in firearm suicides following an increase in gun licenses (14). A similar trend has been identified for accidental firearm deaths, with the frequency of such deaths related to the number of handguns in civilian possession (10).

In the present report, two suicides occurred within a relatively short period of time in individuals who had gained access to weapons on firing ranges. Firing ranges provide facilities for individuals to practice firing under supervised conditions and are usually utilized by members. In case 1, the victim was not a member of the club but had signed in as a visitor, presumably to gain access to a weapon that he could use to self-harm. In case 2, the victim was being instructed in firearm usage. Both cases were the subject of coronial inquiry where recommendations were made for tethering of firearms and the used of bullet proof screening for individuals who do not possess a firearms license or who are not members of the club (15). Such cases are not confined to Australia with an incident in Colorado, United States, in November 2010, involving twin sisters who shot themselves at a firing range in a suicide pact. One of the sisters survived; both were Australian citizens. CCTV footage excluded any other individuals from being involved in the shooting (<http://www.theaustralian.com.au/news/world/colorado-shooting-range-victims-were-twins>, accessed June 9, 2011).

The significance of these cases lies in the ready accessibility that firing ranges may provide to individuals who are seeking weapons for suicide attempts. Such attempts may occur, as in the reported cases, even while the victim is under direct supervision. Security video surveillance used in firing ranges may be very useful in confirming witness statements. While these cases are certainly rare in the local South Australian population (no others were found on a 10-year retrospective search of files at Forensic Science SA), the potential vulnerability of firearm clubs or ranges to this type of event should be recognized. The possibility of copycat suicides should also be considered.

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Additional information and reprint requests:

Roger W. Byard, M.B.B.S., M.D.
Discipline of Anatomy and Pathology
Level 3 Medical School North Building
The University of Adelaide
Frome Road
Adelaide
SA 5005
Australia
E-mail: roger.byard@sa.gov.au