

PAPER**PATHOLOGY/BIOLOGY**

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Autoerotic Death: Incidence and Age of Victims—A Population-based Study

ABSTRACT: Review of the Australian National Coronial Information System and the Swedish National Forensic Database was undertaken over a 7-year period from 2001 to 2007 for all cases where death had been attributed to autoerotic death or sexual asphyxia. In Australia, there were 44 cases (M:F = 42:2) with the majority of victims aged >30 years (77%)—a yearly national rate of approximately 0.3/million. In Sweden, there were nine cases (M:F = 9:0) with the majority of cases aged <30 years (55%)—a yearly national rate of approximately 0.14/million. The usual male predominance was present in both populations, although the Australian victims were older than is usually reported. Lethal sexual asphyxia is uncommon in both the Australian and Swedish populations, with a lower rate than has been cited for North America. Whether this is because of different kinds of paraphilic activities in different populations or of differences in methods of central data collection is uncertain.

KEYWORDS: forensic science, autoerotic death, sexual asphyxia, paraphilia, incidence, death rates

Autoerotic death refers to an unintentional lethal event occurring during solitary sexual activity that resulted from an unexpected effect or outcome of a device or substance that was being used to enhance sexual activity (1). Classically, victims of autoerotic misadventure are young men who asphyxiate when a fail-safe device that was installed to prevent significant injury or death malfunctions, and the victims are either suspended by the neck or suffocated by external chest compression or upper airway occlusion (2–4). However, the mechanisms and situations involved are also very diverse, with quite bizarre and unusual death scenes being encountered. Deaths have also occurred in children and in the elderly (5–8).

The actual incidence of nonlethal sexual asphyxia in the community is difficult to determine as the behavior is by its very nature solitary and secretive (4,9). There may also be marked differences in incidences between populations because of varying religious and cultural practices and also between different communities in the same population. Numerous lethal cases have, however, been reported where it is clear that the behavior had been successfully practiced for many years without discovery. The incidence of lethal events should be somewhat easier to determine, as a clearly defined end point has been reached that has usually resulted in police and medico-legal investigation. However, the literature on national rates is not detailed, with quite a degree of variation in reported numbers and a paucity of recent information. The following study was therefore undertaken to compare the rates of lethal sexual asphyxia in Australia with Sweden and to see how these data compare to rates quoted in studies from other countries.

Materials and Methods

The National Coronial Information System (NCIS) in Australia (<http://www.ncis.org.au>) was reviewed over a 7-year period from 2001 to 2007 for all cases where death had been attributed to autoerotic death or sexual asphyxia. The NCIS is an electronic database containing information on coronial cases from all Australian states and territories since 2000. The Swedish National Forensic Database (Swedish National Board of Forensic Medicine; <http://www.rmv.se>) was reviewed over the same time period for similar information. Cases had been de-identified and diagnoses, age, and gender were noted. Data after 2007 were not included in the study as not all case investigations had been concluded in later years.

Results

Over the time period of the study in Australia, there were 44 cases of autoerotic death (seven in 2001, three in 2002, seven in 2003, seven in 2004, eight in 2005, seven in 2006, and five in 2007). The causes of death were listed as “asphyxia/hanging” in 40 cases, traumatic injury/perforation in two cases, and electrocution in two cases. There were 42 men and two women. No cases were reported in individuals aged over 70 years, with seven cases between 60 and 69 years, six between 50 and 59 years, eight between 40 and 49 years, 13 between 30 and 39 years, nine between 20 and 29 years, and one between 10 and 19 years. The approximate population of Australia in 2001 was 19,530,000 and in 2007, 21,180,000 (10), giving a yearly national rate of approximately 0.3 per million population. Three cases occurred in South Australia during this period, all of which involved hanging, giving a similar rate of 0.3 per million population.

In Sweden, there were nine cases of autoerotic death. The causes of death were listed as “asphyxia/hanging” in all nine cases. No cases with traumatic injury/perforation or electrocution were found. All nine were men. There were no victims aged over 50 years, with two cases between 40 and 49 years, two between 30 and 39 years,

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and 5 between 20 and 29 years. There were no cases aged between 10 and 19 years. The approximate population of Sweden in 2001 was 8,909,128 and in 2007, 9,128,927 (11).

Discussion

Autoerotic death has been well described in the literature as death caused by misadventure while the victim was engaged in solitary sexual activity. Classically, death results from malfunction of equipment that was used to augment sexual activity, often by inducing hypoxia. In addition to ropes and gags, hypoxia may be induced by covering the head with a plastic bag, wrapping the body in plastic, or inhaling volatile substances (12,13). While most victims are men, occasional cases involving women have been reported; however, given the rarity in women, the possibility of homicide should be considered (14–16). Autoerotic deaths should be clearly distinguished from deaths that result from cardiovascular diseases exacerbated by sexual activity, as the manner of death in these cases is natural.

Underlying lethal mechanisms in autoerotic deaths range from sepsis because of foreign body insertion and hyperthermia because of overdressing, to submersion and crush asphyxia (17,18). The most common scenario involves a young man who is found hanging in a secure and secluded location, often dressed in female underclothes, with pornographic material nearby. Victims have displayed photographs of themselves wearing fetishistic attire, and there is an overlap with bondage and sadomasochism (19). This type of autoerotic activity is classified as a paraphilia, as sexual excitement depends on the use of unusual objects and/or imagery (20). Generally, the victim is not suffering from any identifiable mental illness, although depression may occur. In the latter instance, it may be difficult to distinguish an accidental death from suicide (21).

If the scene is not disturbed, the diagnosis of autoerotic death is usually not difficult. Problems do arise, however, with atypical cases (22) such as those involving women, where there may be a paucity of typical props. Similarly, clues may be missing if family members or friends have altered the scene to disguise the true nature of the victim's activities. Cases have been mistaken for both suicides and homicides (19), all of which may lead to underdiagnosis. Unfortunately, there are no pathognomonic features at autopsy to assist with the diagnosis (23).

Alternatively, it is also important not to overdiagnose sexual asphyxia. For example in adolescents, the possibility of simple suicide or the "choking game" should be considered. In the "choking game," children and adolescents induce asphyxia by using neck ligatures to induce a feeling of nonsexual euphoria through cerebral hypoxia. The majority of practitioners are boys (87%) aged 6–19 years (mean 13.3 years), and the behavior is either undertaken alone or performed among friends. In the U.S. between 1995 and 2007, 82 fatalities were identified (24,25).

The incidence of fatal sexual asphyxia has varied among reports with 0.49 cases per million per year reported in Hannover, Germany, compared to an estimated two to four cases per million in the U.S. and one to two cases per million in Scandinavia (19,26,27). This represents approximately 40–80 cases per year in Germany and 500–1000 cases per year in the U.S. (19,26). This contrasts with only 0.1 cases per million reported in Sweden, with even lower rates in Italy (28,29). In South Australia over the period of the study, there were three cases, representing 0.3 per million of the state population per year (10). To provide national Australian data, review of the NCIS was undertaken revealing only 44 cases from 2001 to 2007, or again, approximately 0.3 cases per

million of the population per year. Swedish national data for the same time period showed 0.14 cases per million per year. The usual male predominance was present in both of the study populations. While the literature cites a predominance of victims aged between 15 and 25 years (4), the most common age of victims in the Australian data was between 30 and 39 years with only one victim aged <20 years. Similarly, in the Swedish data, there were no victims under the age of 20 years. Whether or not this reflects a changing demographic for autoerotic deaths is unclear, but it warrants further investigation.

The data show that lethal sexual asphyxia is very uncommon in the Australian and Swedish populations and that the cited incidence in the literature varies considerably depending on the group reported. Whether this is because of different kinds, or rates, of paraphilic activities in different populations or of differences in methods of central data collection is uncertain. When rates of autoerotic fatalities are being discussed, local population data provide the most accurate measure of incidence.

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