

Autoerotic Deaths: A Seven-Year Retrospective Epidemiological Study

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Abstract: Epidemiological data on autoerotic deaths is still largely limited. The incidence has been evaluated in 1983 as approximately accounting from 500 to 1000 deaths per year in United States (considering the population back then, this corresponds to 2.2 to 4.4 cases per million inhabitants per year). However, this incidence has never been re-evaluated since. Also, it has been previously shown that the female proportion of all published cases is about 4.5%, while atypical cases represent about 10.3%. On a seven-year period, all autopsy cases for the Quebec province (Canada) were reviewed for autoerotic deaths. We found an incidence of 0.2 cases per 1 million inhabitants per year, a female representation of 11% and a proportion of atypical cases of 22%. Therefore, this study revealed that the widely cited incidence of 500-1000 autoerotic deaths per year may no longer be valid. In addition, atypical cases proportion seems to be underestimated.

INTRODUCTION

Autoerotic deaths have been defined as accidental deaths occurring during individual, usually solitary, sexual activity in which a device, apparatus, or prop employed to enhance the sexual stimulation of the deceased in some way caused unintentional death [1]. A 50-year review study of all published autoerotic deaths from 1954 to 2004 has demonstrated that most common methods of autoerotic activity leading to death are asphyxia by hanging, ligature, plastic bag, chemical substances or mixture of these [2]. On the other hand, atypical methods of autoerotic activity leading to death can be regrouped into five broad categories: electrocution, overdressing/ body wrapping, foreign body insertion, atypical asphyxia method (e.g. chest compression, inverted or abdominal suspension, immersion) and miscellaneous [2]. Those atypical cases represent about 10.3% of all published cases. As for female cases, they represent 4.6% of published cases [2].

Epidemiological data on autoerotic deaths are scant. In 1983, it has been estimated by Burgess and Hazelwood that autoerotic fatalities account for about 500-1000 deaths per year in the United-States [3]. Though this incidence is widely cited, it has never been re-evaluated since in United-States nor Canada.

The present study was conducted to evaluate the incidence of autoerotic death in our population, as well as the male:female ratio and the proportion of atypical cases.

MATERIAL AND METHODS

In Quebec (Canada), a single centralized forensic laboratory covers the entire 7.5 million province population. On a seven-year period (2000-2006), all autopsy cases performed at this laboratory were reviewed for autoerotic deaths.

RESULTS

Overall, on 4813 autopsies performed on a 7-year period, a total of 9 autoerotic cases were found (8 men, 1 woman).

From these cases, two qualified as atypical autoerotic deaths: one body wrapping (case #1) and one submersion (case #2). Therefore, atypical cases represented 22% of all reviewed cases. The male:female ratio was 8:1 (female case: case #3).

Case #1: a 34-year-old man found lifeless in his apartment, clothed only in his underwear. He was lying on his back, completely enclosed from head to toe within a large plastic bag. Once enclosed within the bag, the victim could only obtain oxygen from the air outside of the bag by breathing through a small tube of 1 cm in diameter. Also piercing the bag was a black wire connecting headphones to a nearby computer showing sadomasochistic material. A knotted red plastic bag that contained an uncapped aerosol can of leather and suede protector was also found next to the victim, inside the larger plastic bag. Numerous photographs of nude men were scattered on the scene. The cause of death was determined to be asphyxia due to oxygen deprivation in association with nonlethal levels of hydrocarbons. This case was previously published as a case report [4].

Case #2: a 25-year-old man found floating on a lake in summertime. This was a complex case previously reported under the name aqua-eroticum [5]. The man was nude under a home-made plastic body suit, overdressed for the season with winter clothes and restrained by complex bondage. He was submersed, tied underwater to a boat and was using a home-made diving apparatus for air supply. Death was ruled as accidental autoerotic asphyxia from rebreathing, caused by the faulty air-supply device.

Case #3: a 34-year-old woman found dead in her apartment, kneeling and curled up behind the entrance door. She was fully dressed but her sweater was lifted over her head, exposing her breasts, and her jeans unzipped. Several foreign body insertions were described at autopsy: a pair of scissors in her pants between buttocks, a \$20 dollar bill in her mouth, a small bag of white powder, another \$20 dollar bill and a small piece of paper at the vestibula area, a syringe, a small crumpled bag and three syringe caps in the vagina, and a toothbrush in the anus. A dog leash was forming two loops around her neck. Death was attributed to cocaine intoxication in an autoerotic context. This case was previously reported [6].

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Case #4: a 26-year-old man found dead lying face down on his bed, hanged by a belt to a hook on the wall behind the bed. He was wearing only underwear and his hands were tied loosely behind his back. Pornographic material was on the bed. Death was ruled accidental autoerotic asphyxia from hanging.

Case #5: a 63-year-old man found dead lying on his bed, with numerous conjunctival and facial petechiae. He was only wearing a woman nightgown. Abundant pornographic material was scattered on the scene, including three inflatable dolls in the bed. Glue tubes and rubber stripes were lying on the sidetable. Toxicological analyses were negative. After a thorough investigation, it was concluded that the cause of death was asphyxia of underdetermined type in a context of autoerotic accident.

Case #6: a 25-year-old man found lying supine on his bed with a plastic bag partially covering his head. He was only wearing a spandex short, rolled down on his leg, exposing his genital organs. A brown belt and a can of butane were found near the body. After toxicological analysis, death was attributed to isobutene acute intoxication in an autoerotic context.

Case #7: a 25-year-old man found hanging in his living-room. He was wearing a dog collar, pantyhose and a woman string. Death was ruled accidental autoerotic asphyxia from hanging.

Case #8: a 36-year-old man found dead lying nude in his bed, a plastic bag covering his head. The bag was sealed around the neck by a dog collar chain choker. Death was ruled accidental autoerotic asphyxia.

Case #9: a 43-year-old man found dead in the front passenger seat of his car, a plastic bag over his head and the security belt forming tight loops around his neck, over the plastic bag. His wrists were tied loosely together by another plastic bag. He was wearing a woman rubber raincoat as well as woman leather ankle boots. The elastic band of his underwear was stuck under his scrotum, exposing his genital organs. The cause of death was determined as accidental autoerotic asphyxia (ligature strangulation combined with suffocation). Furthermore, toxicological analysis revealed non lethal ethylic intoxication and presence of cocaine.

DISCUSSION

The incidence of autoerotic deaths has been evaluated in 1983 as approximately accounting from 500 to 1000 deaths per year in United States [3]. Since then, this incidence has been largely cited, without further re-evaluation. Considering that the population of United States in 1983 was of 226.5 million population [7], the incidence established by Burgess and Hazelwood corresponds to 2.2 to 4.4 cases per million inhabitants per year. In comparison, 9 cases in 7 years for our 7.5 million population correspond to an incidence of 0.2 cases per million inhabitants per year. In other words, though we expected 115 to 231 cases for the 7-year period according to the previously stated incidence, only 9 cases were actually found. Therefore, the widely cited incidence of 500 to 1000 deaths per year may be overestimated or may no longer be valid. Of course, some may argue that our sample of autoerotic deaths is small to assert such a conclusion. However, it should be taken into account that our small number of auto-

erotic deaths is for a relatively big population, which is exactly the point in questioning the validity of an incidence that has not been updated in the last 20 years. It is possible that the previously published incidence has changed since then or present cultural variability.

Interestingly, our incidence of 0.2 cases per million inhabitants per year in Canada is not so different from the incidence calculated in two recent different studies in Germany. In the Hannover region, 11 cases were found in a 20-years period (1978-1997), representing an incidence of 0.49 cases per million inhabitants per year [8]. As for the city of Hamburg, they found 40 cases in a 20-years period (1983-2003) and estimated that the frequency of autoerotic deaths was of 1:1000 in autopsy material and 0.5 cases per million inhabitants per year [9]. In comparison, our 0.2 cases per million inhabitants per year in Quebec, Canada, was representing about 1:500 in forensic autopsy material.

Moreover, a paper reviewing all autoerotic deaths in the literature from 1950 to 2004 has found a 10.3% proportion of atypical cases in the literature [2]. However, epidemiological data taken from compiled published cases may not be representative of the reality, especially since atypical cases are more prone to be published than typical classical ones. Therefore, one could assume that atypical cases proportions found in the literature overestimate reality. On the contrary, the authors' results suggest the opposite. Indeed, despite our low number of cases, the present study revealed that atypical cases proportions based on the literature data may be underestimated. As a matter of fact, while atypical cases represent 10.3% of cases in the forensic literature, this study found a proportion of 22% for such cases.

In terms of gender, we found only one female case during the seven year-period study. This is in keeping with the well-known male predominance in autoerotic fatalities [2]. However, it is important to insist that female cases exist as well and should not be overlooked, especially since their presentation generally differs from their male counterpart [6]. As a matter of fact, female represented 11% of autoerotic cases in this study and 4.6% in published cases.

CONCLUSION

This study gives new insight into epidemiological data of autoerotic deaths. When comparing our population to the literature data, it seems that incidence of autoerotic deaths may no longer be valid. As for atypical cases, they may be more frequent than generally assumed. Further studies in other populations are required to corroborate those results and to assess possible cultural differences.

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