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Suicide by Motor Vehicle

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ABSTRACT: Five suicides by motor vehicle drivers are reported. Possible frequency of such incidents and methods for their investigation, as well as patterns and characteristics of suicidal behavior, are discussed. Published reports of suicide by motor vehicle are scarce. Proven cases should be reported by medical examiners and coroners to help establish the patterns of such deaths.

KEYWORDS: pathology and biology, suicide, motor vehicle accidents, suicide investigation

In 1967, 53 000 deaths and in 1970, 54 000 deaths occurred in this country in motor vehicle crashes with almost unanimous certification of the fatalities as accidental [1,2]. We can assume that nearly all of the 53 300 fatalities of 1980 [3] were also determined to be accidental. Nevertheless, it is suspected that some of these were the result of intentionally caused crashes.

In spite of this suspicion of motor vehicular suicides, there have been few publications on the subject and practically none concerning the method of investigation of suspected cases.

It is the purpose of this article to present five cases of vehicular suicides experienced by Cuyahoga County Coroner's Office, and to discuss the possible frequency and the investigational method of such suicides. A brief discussion on general suicidal behavior is added which might not be generally appreciated by medicolegal death investigators.

Case Presentations

Case 1

A 37-year-old man died on Easter Sunday of blunt trunk trauma following a single automobile crash in which he was the driver and sole occupant. Seven fresh superficial stab wounds on the lower chest and three incised wounds on the left palm were noted as well as several linear scars in the epigastrium, left antecubital fossa, and left wrist. Toxicological studies were negative for alcohol and psychotropic drugs. The above unusual injuries prompted a further investigation. The incident took place in the early evening with good driving conditions on a straight portion of an interstate throughway. The victim's vehicle left the roadway and traveled 146.30 m (480 ft) in a straight line before colliding into a concrete pillar of an overpass. The decedent had had a problem with alcohol, difficulty keeping a job, and disabling ankylosing spondylitis. Two weeks before the fatal crash he had been taken to a hospital by ambulance

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because of multiple self-inflicted superficial stab and incised wounds of the epigastrium and left arm. He admitted his suicidal intention at that time.

In this case the stab and incised wounds and scars aroused the suspicion of suicide. Through enthusiastic police cooperation, information on the victim's sociopsychological history was obtained that helped to determine the manner of the death. Apparently the decedent failed in his attempt to stab himself to death and subsequently used his vehicle to destroy himself. Pokorny et al reported a case of a young man who died as a result of injury when he ran his car into a concrete abutment. He also had a self-inflicted, superficial incised wound in his precordium [4].

Case 2

A 32-year-old married woman drowned herself and her 11-year-old son by driving her auto into Lake Erie. Before the fatal plunge she had been seen smoking a cigarette in her auto which was parked near a pier directly across from a broken portion of a fence. She drove through the damaged fence and off the pier at a high rate of speed. While the vehicle was briefly afloat, she refused to be rescued by several men who jumped into the water, locking the rear door on the driver side. Her eight-year-old daughter who was also in the car was rescued after escaping through a window with the help of her brother inside. Toxicological analyses on the driver were negative for alcohol or psychotropic drugs. She had been under treatment for paranoid schizophrenia and had two past bizarre suicide attempts.

Case 3

A 33-year-old woman drowned herself and her three children (ages four, eight, and ten) in her two-door sedan submerged in Lake Erie. Their car had been standing with its lights on in a marina parking lot facing the lake. She was seen to drive to the edge of the water, back up, and finally proceed forward at a high rate of speed into the lake. The driver's blood ethanol concentration was 100 mg/dL. The vehicle was in good operating condition. The ignition was on an "on" position and the other key was in the passenger side door locking it from the outside. Her husband had lost his job two months previously because he had been charged with grand theft, thus depriving the family of financial resources. The decedent had been despondent over the financial situation, and had left home in the car with the children after a debt collector's visit.

Case 4

A 25-year-old divorced man drowned in his auto after it plunged into Lake Erie. He had been seen stopping his vehicle by the water and then driving into the lake at a high rate of speed. Despite the fact that the auto floated for a few minutes, the driver did not attempt to escape. Postmortem toxicological studies were negative for alcohol or common drugs. He was suspected of slaying his 22-year-old girlfriend who had been found stabbed to death in their home just before his immersion in the lake. The man also had a police record of juvenile manslaughter, traffic violations, and aggravated robbery.

Cases 2, 3, and 4 were simpler for the investigators because each incident was witnessed throughout almost its entire course. All three drivers stopped near the water before the final plunge. Each of them showed sufficient acute psychosocial or psychiatric perturbation or both to account for at least some of their deliberate self-destruction. Cases 2 and 3 were noteworthy because of simultaneous homicides and homicidal attempts by mothers involving their own children.

Case 5

A 24-year-old man died in an auto crash. A few hours before the incident he had revealed in a conversation with a young woman at a bar that he was intoxicated and despondent. He recounted his recent loss of job, a pending marital separation, and ongoing doctor's care for a "serious illness." Before leaving the bar he stated that he was going to "roll his car" and that she should come to "watch him die." She left the establishment in her auto shortly before he did, and then he passed her at a high rate of speed. Other witnesses saw him driving his car recklessly. He ran into an embankment and the auto rolled over several times, finally resting on the ejected victim. His fatal injuries were blunt impacts to head and trunk. The blood alcohol concentration was 230 mg/dL.

This case is unique because of an account of the imminent suicidal intent and method had just been related to a female drinking companion by the suicide immediately before the fatal act. Without this woman's testimony this case might have been called an accidental death, especially in view of his high blood alcohol level.

Discussion

The majority of the publications on this subject in the past two decades were written by psychiatrists or psychologists, and few were by medical examiners or coroners [1,2]. An article was written by a police surgeon in New Zealand [5]. Generally, the number of reported cases is scanty—more proven cases should be published to establish patterns for this type of suicide [6], especially by medical examiners or coroners who have more access to the cases and who are responsible for certifying the cause and manner of such deaths.

Frequency of Occurrence

Edland concluded that 13 of the 86 traffic deaths (15%) he studied were the result of 11 purposefully caused collisions [1,2]. He believed that 10 to 15% of fatal single vehicle crashes were suicides and added: "A lot of my colleagues don't believe it, but some think it's much higher—perhaps 30%." Eighty-five percent of fatal single crash victims and almost all of those he considered suicidal were intoxicated [7].

Pokorny et al investigated 28 consecutive auto crash fatalities in which the deceased was judged to be responsible for the crash, along with 28 control cases. Four of the 28 deaths (15%) were judged suicides (none in the control group) [4]. However, in a series of 182 crashes (111 single vehicle and 71 multiple vehicle), studied by Schmidt et al, each of which resulted in at least one driver fatality, only three were considered to be probable suicides (1.7% of the total fatalities and 2.7% of the single car fatalities) [8].

Hamburger reported a series of 41 patients who underwent detailed psychiatric examinations because of their suicidal ideation. Six of them expressed the idea of using motor vehicles as means of committing suicide [9].

Jenkins and Sainsbury studied the validity of the popular claim that many single car, single occupant road deaths are suicides. "If a substantial proportion of these deaths are deliberate, a) their seasonal variation and their age distributions would be similar to those of suicides; b) they would occur independently of road conditions, while other single car fatalities would be more likely to occur when road conditions are adverse." The peak for the suicides was in April, while that for the road deaths was in November. The age distributions of single car road deaths when a driver was alone and when passengers were present did not differ, and were highest in the young age groups (15 to 24 and 25 to 34 years old); in contrast, suicides increased with age. Similar proportions of both categories of road deaths, that is, single occupant and multiple occupant, occurred under favorable or adverse road conditions [10].

In the three-year period (October 1978 through September 1981) the Cuyahoga County Coroner's Office investigated 187 fatal single vehicle crashes or immersions with deaths of drivers who were apparently responsible for the incident. In 156 instances, the victims were the sole occupants of the vehicle. Five deaths were deemed suicides. In five others, the question of possible suicide was raised because of the nature of the crashes; however, insufficient information concerning the decedent's psychosocial background was available to permit the ruling of suicide. Among 156 single vehicle, single occupant fatalities, 88 victims (56%) had significant blood ethanol level (over 100 mg/dL), while 30 (19%) had no measurable blood alcohol. In 38 instances, blood alcohol concentrations were not determined because of prolonged survival of the victims in the hospital. (Alcohol tests were not performed in the hospitals.)

Investigation of Vehicular Suicides

Under what circumstances should the suspicion of vehicular suicide or suicidal attempt be raised? Actually, any case, fatal or nonfatal, in which there is no reasonable explanation why it happened, should be viewed with suspicion. Single vehicle, single occupant crashes, in particular, should raise more suspicion of suicide than multiple vehicular or multiple occupant cases or both [11].

Visibility, road conditions, presence or absence of skid marks, braking or other evasive action, and mechanical condition of the vehicle are essential clues. A medical examiner or coroner can supplement the investigation by making a visit to the scene. The driver's shoe sole (sometimes side of shoes) may retain the imprint of the object on which it was resting at the time of the impact. The accelerator and brake pedal pad and mat near the driver's seat should be examined for such marks.

Identifying suicides among fatalities caused by motor vehicle incidents is a major challenge faced by medical examiners or coroners. Not only is it difficult to distinguish a deliberate vehicular crash from an accidental one by its inherent nature, but the ambiguity is frequently capitalized upon by those people attempting suicide in order to conceal their intent for reasons of insurance, pride, or to avoid stigma to the family [9].

A young woman drove at a concrete abutment at a high rate of speed. She was confident that she would not survive despite use of a safety belt which she had worn to dispel any suspicion of suicide. She survived [12].

Some subjects wreck vehicles deliberately—responding to rejection or other frustrations impulsively and through violent discharge [12]. In such cases there is no chance of finding a pre-prepared indication of suicide such as suicide note.

A woman, following an argument with her husband, jumped into her car and drove into a truck at the nearest intersection. "All of a sudden it came on me to ram into the truck and get it over with. I didn't think about it till I saw the truck coming along the highway..." [12].

There are more confusing situations. A tire blowout can be the consequence rather than the cause of an "accident." Skid marks may represent the suicidal person's last minute's hesitation, or his preliminary trial just before the final overturning by a sharp twist of the steering wheel, similar to tentative, "hesitation cuts" on the throat by the person committing suicide by cutting his throat [12]. A crash can be caused by an occupant other than the driver. Suicidal acts by mentally ill patients are often surprising.

An injured "victim" of vehicular crash later confessed his suicidal attempt saying; "I was aiming for the overpass but chickened out at the last minute" [8].

A paranoid schizophrenic woman, grabbed the steering wheel of the car while her husband was driving. She later said that she had wanted to run the car into the ditch to end it all [13].

A sociopath drove into the path of an oncoming car, whose driver swerved into the wrong lane to avoid the collision. The former corrected his aim and both cars were badly damaged. The blameless driver had the odor of alcohol on his breath, causing the police to disbelieve his account of the collision, and was charged with driving on the wrong side of the road [12].

The possibility of vehicular crash because of the driver falling asleep at the wheel should be ruled out with information on the victim's state of physical exhaustion and his or her psychosocial background.

Death of a driver with a high blood alcohol concentration presents a dilemma as to whether the crash occurred because he was intoxicated or he had become intoxicated to cause the accident or, further, the intoxication triggered or enhanced the suicidal impulse [14]. Again, psychosocial study on the victim is mandatory.

General Suicide Investigation

Would-be suicides are as varied in their personality traits and behavior patterns as other individuals and, accordingly, their methods or procedures for self-destruction and behavior preceding the fatal attempts may present themselves in diverse ways, thus defying some of the preconceived ideas regarding suicidal behavior by some.

A popular fallacy is, "If a person has plans for the near future, e.g. vacation arrangements, marriage, and the prospect of a promotion and a better job, he or she will not commit suicide." Suicide attempters may have simultaneous suicidal preoccupations as well as plans for the future. In fact, an inescapable realization of his inability to enjoy a vacation may be the "last straw" for a depressed person [15]. Moving into a situation of greater responsibility or moving away from home, familiar persons, or environment may be detrimental to the individual rather than a cause for happiness [16].

A helpful criterion for determining true manner of death in equivocal suicide is, "In general, if the deceased was following his usual life style during the period preceding his death, suicide is less likely. If death followed or resulted from a significant change in the patient's style of living, then suicide is more likely" [15].

A man was killed by a train when he stopped his car on the track. The railroad crossing was not on his regular route home from his office. On the day he had not gone to his office at all, an unusual omission for him. Furthermore, he had been having marital difficulties and had seen a physician for symptoms suggestive of depression [15].

An increased risk of suicide occurs around the anniversaries of the deaths of the suicidal persons' close relatives, especially spouses or fathers [17]. Also, the suicide rate rises immediately after a journalistically publicized suicide story ("Werther effect") [18].

Psychological autopsies conducted by a team of behavioral scientists, although ideal for suicide investigations, are not always feasible. The decedent's psychosocial history should be obtained from the family, friends, attending physician, and the like, either by police or, preferably, directly by coroners or medical examiners. The family speaks more freely and gives more candid information immediately after the tragedy rather than later, and frequently communicate much more readily with physicians or psychologists rather than with police. Parents of a suicide victim tend to be more guarded than siblings.

Essential information to be sought includes the following [8,12,16,19]:

- (1) emotionally traumatic situations before death, for example, death, marital separation, finances, job, health, and so forth;
- (2) incidents that would provoke or increase the decedent's guilt feelings;
- (3) self-punishing behavior, for example, refusal to take holidays, enjoy sexual or other gratifications, or an increase in performing vexing work;
- (4) increased or decreased motor or verbal activity, withdrawal, or recently increased drinking;
- (5) anorexia, weight loss or gain, or insomnia or hypersomnia;
- (6) depression, delusions of guilt, tearfulness, and feelings of worthlessness;
- (7) recent visits to a physician;

- (8) history of alcohol or other substance abuse; and
- (9) mental illness, psychiatric hospitalizations, and evidence of character disorder.

Conclusion

It should be reassuring for a coroner or medical examiner who interviews a suicide victim's family to learn that such interviews can help to reduce guilt in the survivors in a majority of cases. It makes it easier for them to accept the victim's death. Thus, the interview is therapeutic [15]. However, it may take an experienced and compassionate professional to attain this.

Despite a thorough and skillful investigation, there is a small percentage of cases with significant doubt as to the manner of death. These cases should be certified as manner "undetermined" [6,20]. Further, there should always be a few "undetermined" cases among hundreds, as these serve to indicate an honest interpretation after investigations have been made as complete as possible.

It is recommended that the death certificate should include an indication of altered psychodynamics, for example, "while depressed" or "while mentally disturbed." "This indication that illness rather than a sane, voluntary act was responsible, frequently, is of comfort to the family" [20].

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