CASE REPORT

José Luis Romero Palanco,[1] Ph.D.; Joaquín José Gamero Lucas,[1] Ph.D.; Miguel Angel Vizcaya Rojas,[1] Ph.D.; and María Isabel Arufe Martínez,[1] Ph.D.

An Unusual Case of Railway Suicide

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ABSTRACT: A rare case of suicide in which the victim had been lying along the railway track in a supine position and with extended extremities is described. The wheels of a train caused longitudinal hemisection with complete evisceration. Epidemiological data on train suicides are given and the relationship between this method of suicide and mental illnesses and consumption of alcohol are discussed.

KEYWORDS: forensic science, forensic pathology, suicide, railway, train, nature of injury, death

A detailed study we carried out on suicide in the city of Sevilla, Spain, between 1957 and 1987 (1,2) revealed that of a total of 10 838 autopsies carried out in the Instituto Anatómico Forense de Sevilla, 8377 were cases of violent death. Of these, 1305 deaths were due to suicide (15.57%). The ratio of males to females was 2.12:1.

In regard to the method used, 33.48% of individuals chose to jump from a height, followed by hanging (15.47%), drowning (15.47%), the ingestion of toxic products (12.72%), jumping in front of a train (11.87%), firearms (4.82%), cutting/stabbing (4.44%), jumping in front of trucks or cars (0.91%), burns (0.61%), electrocution (0.07%), and suffocation (0.07%).

The methods used by the victims of both sexes are specified in the results shown in Table 1. The method most frequently employed by both sexes was jumping from a height (25.5% men; 50.3% women). It must be emphasized that when the sample is analyzed in periods of five years, from 1953 to 1987, a decrease in the frequency of drowning, cutting/stabbing and trains as methods of suicide may be observed while cases involving jumping from heights, hanging and ingestion of toxic products remained constant. However, there has been an marked increase in the frequency of suicides involving firearms.

During the period 1953 to 1987, a total of 155 cases of railway suicides (133 men, 22 women) took place, representing 11.87% of all suicides. The ratio of males to females was 6.04:1. During the period from 1953 to 1977, the average age of individuals who committed suicide employing this method was 54 for men and 49 for women. During the period 1978 to 1987, the average ages for men and women were nearly identical at 54 and 53, respectively.

These results evidently differ from those obtained by other researchers who have found that the average age of the groups of individuals who had committed suicide was lower (3–9). On the other hand, there are significant differences in regard to sex distribution when observations by other authors are compared (5,7,10).

Suicide and Nature of Injury

As in many other cases in medicolegal practice, the discovery of a body on a railway track poses the problem of ascertaining the actual cause of death: Is it a case of suicide, an accident, or homicide? Have injuries been deliberately inflicted on a corpse to conceal the actual cause of death?

The above questions are not easily answered once the nature of the injuries is established and attempts have been made to correlate these injuries with the medicolegal cause of death. In general terms it may be affirmed that the type of injury itself does not distinguish a suicide from an accident or from homicide; furthermore, separating antemortem injuries from postmortem injuries may be very difficult (11).

However, different authors have pointed out that in suicide cases transversal sectioning of the body in the neck area, in the trunk area or in the extremities predominates. This is due to the fact that on most occasions suicide victims lie transversely on the tracks (12–19). Decapitation with no other injury is regarded as typical for a suicide (20–23).

Although it may be true that few characteristics of a medical nature permit one to distinguish between accidental injuries and

TABLE 1—*Violent suicide methods used by both sexes.*

Suicide Method	Total Cases	Males	Females	Ratio ♂ : ♀
Jumping from a height	437	227	210	1.08:1
Hanging	202	177	25	7.08:1
Drowning	202	154	48	3.20:1
Drugs/toxic products	166	76	90	0.84:1
Railway	155	133	22	6.04:1
Gunshot	63	62	1	62:1
Cutting/Stabbing	58	43	15	2.86:1
Jumping in front of trucks or cars	12	9	3	3.00:1
Burning	8	5	3	1.66:1
Electrocution	1	1		
Suffocation	1	1		
Total	1.305	888	417	2.12:1

[1] Chief and professors, respectively, Department of Legal Medicine and Toxicology, Faculty of Medicine, University of Cádiz, 11003 Cádiz, Spain.

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those produced by suicides, fatal railway injury is characterized by extensive disruption of more than one body region (4). Injuries are usually numerous and distributed over very different areas of the body, including open or closed multiple fractures in the extremities which, on occasions, are completely amputated. Cases of true evisceration are not infrequent. Sometimes the injuries suffered reveal an attempt by the victim to avoid being hit (e.g., when only the lower extremities are affected) (4,12,14,24).

Case Report

The subject suicide was a 46-year-old male, single, unemployed, separated from his family, and with a history of schizophrenia with several psychiatric hospitalizations. The last stay in hospital had been 14 months previous to his death. At the time of death he had been under medical supervision at home.

The place of the incident was an uninhabited area quite far from the city center and approximately 8 km from the nearest railway station. The train driver was able to see a man lying along one of the tracks in a supine position and with the extremities fully extended (in the shape of an X). The wheels of the train ran longitudinally from the most caudal part of the body upwards.

The body suffered longitudinal hemisection with complete evisceration (Fig. 1). Traces of viscera were found up to 60 m from the point where the body had been lying initially. The skin and underlying tissue from the anatomical zones in which amputation had taken place appeared with the characteristic bruising of this type of injury. They were found covered in a black, greasy substance and with clearly dried up zones. The massive hemorrhage suffered by the victim prevented alcohol intoxication measurement. The presence of drugs was tested and negative results were obtained.

FIG. 1—*Longitudinal hemisection of a corpse in an unusual case of railway suicide.*

Discussion

We have not been able to find any other case of railway suicide in the consulted bibliography that is similar to this unusual case and its peculiar characteristics. Some authors have affirmed that the originality observed in certain suicidal behavior indicates the existence of mental illness (24), as shown by the manner in which suicide took place in this case. On other hand, many authors have also pointed out that the results of most research suggest that the most violent methods of suicide are used by those with severe mental illness. For other authors there were no essential differences between the methods of suicide used by individuals whether or not there was a psychiatric history (25). Beskow et al. (6) in a sample of 294 cases of railway suicide found histories of severe mental illness in 57% of these cases. Lindekilde and Wang (8) in a study of 505 cases of railway suicide found that 81% were psychiatric patients, correlating mental illness with the degree of violence involved in the methods of suicide. Emmerson and Cantor (9) found that in a sample of 23 railway suicides, 57% of the victims had been treated for schizophrenia. Likewise, Symonds (26) found cases of greater psychosis and neurosis among the railway suicide population, but fewer and less severe alcoholics. In the study carried out by Cooper and Milroy (7), with the exception of the railway and firearms deaths, the more painful/disfiguring methods of suicide (jumping from a height, self-immolation, cutting/stabbing, road traffic "accidents") were more and/or previous suicide attempts than those committing suicide by other means.

Although it was not possible to determine the blood alcohol level in this particular case, some authors have found significant alcohol levels among the railway suicide population (27% of cases) (6), while for other authors the consumption of alcohol may be closely associated with death of accidental etiology (4,23,27).

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Additional information and reprint requests:
Prof. José Luis Romero Palanco
Departamento de Medicina Legal y Toxicología
Facultad de Medicina
Universidad de Cádiz
11003 Cádiz, Spain