Atypical methods of suicide – case reports and literature review

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Abstract: Suicide is an increasing public health problem all around the globe, because of the loss of lives with devastating effects on those left behind. The literature review shows that there are a lot of risk factors associated with suicide, but the psychiatric pathology or psychiatric imbalance at a certain critical moment in the individual’s life seems to play a major role.

This article presents four suicide cases autopsied at the National Institute of Legal Medicine – Bucharest in which the common characteristic is the atypical manner and method of committing suicide: two young men jumping from a high building after chaining themselves together, a self poisoning in a woman by an improvised intravenous line and a man with self inflicted thoracic perforating wound using a mechanical drill. The risk factors associated with these suicides, the preexisting or presumed psychiatric pathology, as well as drug abuse association are reviewed.

Key words: atypical suicide, psychiatric imbalance, suicide method, drug abuse

Suicide (Latin suicidium, from sui caedere, to kill oneself) is the intentional taking of one's own life/ the act of deliberately killing oneself. In many legal systems, a death is certified as suicide if murder, accidental death and natural causes can all be ruled out and if the circumstances are consistent with suicide [1].

In the year 2008 Romania reported to WHO 2802 cases of suicide (a mortality rate average of 12.9/100000 population), out of which 80% were men [2]. There is a moderate increasing in the dynamics of suicide from the year 2007. The Harghita and Covasna counties still remain the counties with the highest rate of suicide. The predominant methods of suicide used in Romania were: hanging (76%), voluntary poisoning by drugs (9%), jumping from a height (5.5%) [3].

A range of risk factors are known to be associated with suicide: individual factors (genetic factors, mental health, history of abuse, prior suicide attempts), familial factors (history of suicidal behavior, parents divorce, poor communication with both parents), demographic and socio-environmental factors (low socioeconomic status, difficulties in school or not attending school, suicide contagion, media coverage) and life stressors (loss of a parent, physical or sexual abuse in childhood or adolescence)[4,5,6,7]. Media can be a suicidal factor in negative and positive ways. Serious physical illness (HIV/AIDS, neoplasms

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and other terminal diseases) are also implicated. There is also a strong evidence that psychiatric disorders (affective disorders, schizophrenia) are the central antecedent in 90–100% of cases of completed suicide, alcoholism or other substance abuse is found in 20–50% of cases [8].

**Case presentation**

The article presents a number of 4 suicide cases that were autopsied at the National Institute of Legal Medicine – Bucharest, the common characteristic seen in all those cases being the atypical manner and method of choice.

**Case report 1 and 2**

In October 2007, the bodies of two young men (19 and 22 years old – Fig. 1 and 2) were found at the base of a ten-floor building in Bucharest, presumably after they had jumped from the top of the building. The peculiar aspect that caught the attention of the forensic investigating team was the two young men were chained together by the neck with an iron chain secured with two locks (one for each deceased). The bodies were autopsied the next day. The autopsy concluded that the cause of death was extensive trauma to the head associated with politrauma, due to falling off from a high building. All the traumatic lesions observed at the autopsy were consistent with the fall, no signs of struggle being noted. Furthermore, the toxicological report ascertained the presence of levalorphan, acetaminophen, chlorpheniramine and methorphan in the blood and urine of the two deceased.

![Fig. 1 Case 1. Note the chain and lock](image1)

![Fig. 2 Case 2. Note the chain and lock](image2)

Further investigations have revealed the circumstances prior to death. The two young men came from dysfunctional families, being known within their circle of friends as heroin-addicted. A statement given by a friend of the two victims has proven to be very helpful in the attempt to establish the manner of death of the victims. In his statement, the victims friend said that he had met the two young men shortly before their death. One of them had been trying early that day to get a job, but had been turned down, and the other was upset because his grandmother had found some drugs in his pocket and confronted him about it. Furthermore, the witness stated the two victims had told him they will jump from the top of a high building, which he obviously didn’t believe.

The police investigation shown that the two young men had bought cough pills from a drugstore and a chain and two locks from a general store, searched for a high building with
access to the roof, got onto the roof, chained themselves together using the chain and the locks and then jumped from the top of the building. The manner of death was ruled as suicide.

**Case report 3**

On the first of January 2009, a 30-years old woman was found dead in her bedroom, lying on the bed, with an intravenous line on her right forearm attached to a saline solution bag (NaCl 0,9%) on a clothes tree, next to the bed (Fig 3). On a chest of drawers, next to the bed, the investigators noticed the presence of another bag of saline, as well as some empty vials and an unsealed intravenous catheter (Fig 4). The access door to the apartment was locked and secured from within, and no signs of struggle were noted in the apartment.

Furthermore, on the deceased’s laptop was found a note to her family, justifying her action.

Further investigations on the scene revealed that the woman was living alone, after her husband passing away about one year ago. She was diagnosed with severe depression about six months after her husband’s death, but she refused any treatment. Prior to that, she had tried to commit suicide by voluntary ingestion of ethylene-glycol, a month after the death of her husband.

The autopsy performed the next day has concluded that the cause of death was an acute intoxication by intravenous administration of Pentobarbital. The toxicological investigation revealed a blood concentration of Pentobarbital of 1173,8 micrograms/ml, as well as an alcohol concentration of 1,5g/l. Pentobarbital was also found in the gastric content prelevated for toxicological analysis, suggesting the hypothesis the woman might had voluntarily

![Fig. 3 Case 3 - The iv line is attached to the right forearm](image)

![Fig. 4 Case 3 – Saline bag and perfusors](image)
ingested some of the pentobarbital prior to the intravenous administration. The manner of death was ruled as suicide.

**Case report 4**

In January 2009, a 76 years-old man was found dead in his apartment by his maid. Next to the corpse was found a manual (mechanical) drill, which presented some stains of blood on the drill (Fig 5). On-scene forensic examination revealed a right anterior thoracic laceration, at the anterior axillary line of the 6th intercostal space (Fig 6).

The autopsy revealed that the laceration observed had a penetrating trajectory through the lower lobe of the left lung and the apex of the heart, on the anterior surface of the right ventricle (Fig 7). It has been concluded that death was due to an internal and external hemorrhage determined by a thoracic perforating wound. The toxicological report was negative.

The morphological aspect of the external and internal lesions, corroborated with the blood found on the borer drill, have lead to the conclusion that the lacerations were produced with the aforementioned mechanical drill. The absence of any other traumatic lesions on the deceased’s body, as well as the police investigation aspects, were consistent with the idea that the lesions were self-inflicted, the death being hence ruled as suicide.

**DISCUSSIONS**

The common element noted in all these cases presented above was the atypical methods of suicide or atypical features or characteristics seconding an otherwise relatively common method of suicide.

For example, suicide by jumping off a high building by acute intoxication with various drugs or polimedication, or by a self-inflicted injury to the heart is not so uncommon but a double suicide in which the two victims had chained themselves together, the intravenous administration of drugs, or using a mechanical borer for a self-inflicted injury are uncommon elements.
An important feature in the first 2 cases presented is the drug addiction, the two young men being known recreational users of illegal substances. Moreover, prior to the suicidal act, they had consumed dextromethorphan (DXM), an antitussive drug that when ingested in larger amounts acts as a dissociative hallucinogenic drug. Products that contain dextromethorphan often contain other ingredients such as acetaminophen and chlorpheniramine. Abusers describe the DXM experience as occurring on four different plateaus and report the following effects: mild inebriation, an effect similar to alcohol intoxication, mild hallucinations; the speech can become slurred and short-term memory may be temporarily impaired. Higher doses create an altered state of consciousness, mind and body dissociation or an „out-of-body” experience [9].

Taking into account this facts, especially the symptoms noted with the use of the substance, one can assume a possible psychosis that lead to the suicidal act, and a possible “message” that might have been intended to send through this action.

In the third case, it has been noted that the deceased was suffering from a severe form of depression. This psychiatric pathology is strongly correlated with autolitic tendencies. Usually, the suicidal acts in depression tend to occur around the time of winter holydays or in the spring. In the case presented, the death most probably occurred on New Year’s Day. The method used, although atypical, can be correlated with the general features of this psychiatric pathology. The drug used was Pentobarbital (Nembutal), which is a sedative/hypnotic drug, being used in some countries even for assisted suicide or lethal injection.

The atypical feature of this case is the interest shown by the deceased in the selection of method and substances, by choosing a painless, as well as a certain method to commit suicide. The intent to die is, in this case, certain, considering the serum concentration of the pentobarbital (much more over the DML), associated with the blood alcohol concentration, as well as the presence of the substance in the gastric content, suggesting a voluntary ingestion prior to death.

Sometimes, the suicidal act appears as a first sign of an underlying mental imbalance, as seen in the fourth case presented above, in which no pathology was found (neither somatic or psychiatric). The object that has been used may lead to the assumption of an existing form of mutilation and self-inflicted pain, features sustaining a possible latent psychiatric pathology.

Conclusion

The suicidal act represents an action that could never be fully understood or explained, because it reflects in itself an attitude contrary to human nature and instinctual behavior. Having in mind the fact that the human being is the only species within the animal regnum that commits suicide and has auto-aggressive behavior, one can speculate to the fact that the human psyche represents an important (if not the only) factor involved in the suicidal act. Moreover, it seems that the more unusual the method and means used, the more severe the psychiatric disorder may be.

Considering the unusual methods and means of suicide used in the cases presented above, one can assume the hypothesis that the suicidal act can almost always be regarded as a manifestation expressing an underlying (latent or manifest) mental imbalance or a psychiatric pathology.
References