



Suicide Pact in a Cocaine Related Death: A Case Report

Juan Pedro Montoya-Ramírez^{1*}, Alejandra Peña-Gutiérrez¹, Diego Nicolás Sánchez-Barríos¹, Andrés Felipe Méndez-Bonilla¹, Johan Leandro Escobar-Pérez¹ and Mario Alberto Hernandez-Rubio²

¹Department of Medicine, University of La Sabana, Colombia

²Department of Legal Medicine, University of La Sabana, Colombia

Abstract

Introduction: suicide pacts are an infrequent event, in which two or more people reach a mutual agreement to take their own lives, at a given time and place. Over the past decade, there has been a gradual increase in the suicide rate in Colombia. Several studies have previously treated the relationship between the use of psychoactive substances and the risk of suicide, the increase in risk is well known.

Findings: The levels of cocaine in the blood found in the samples of both bodies were in lethal ranges. In the two cases presented, nonspecific signs of hypoxia were found in the necropsy, suggesting that acute respiratory failure caused death in both cases.

Conclusion: Despite the close relationship between cocaine use and the risk of suicide, its use as a mechanism for causing death is highly unusual. In this case a violent suicide death occurs; the notes found played a fundamental role in establishing the context of a suicide pact, in addition the presence of underlying disease and depressive symptoms have been described as factors frequently associated with these pacts.

Keywords: Violent death; Suicide; Intoxication; Cocaine; Suicide pact; Diadic death

Introduction

Suicidal covenants are an infrequent event, in which two or more people reach a mutual agreement to take their own lives, at a specific time and place [1]. By definition, it requires the consent of all parties involved [2]; however, this can be presented in several ways. It may include the simultaneous suicide of the members of the pact, such as a double suicide, in which case it is usually easier to determine the consent of each member. In addition, it can be presented as a homicide, followed by the perpetrator's suicide; these cases usually require further investigation to determine the alleged consent of the homicide victim [2,3].

Several studies have previously deal with the relationship between the use of psychoactive substances and the risk of suicide [4], a person who uses cocaine has a high probability of suffering some type of associated psychopathological disorder such as depressive disorders and suicide attempts, among others. Despite this, cases of overdose death are usually associated with accidental circumstances [5], and not properly used as a means to generate death. Classically, occurring in people closely linked to each other, such as spouses, lovers or relatives, what is known as "dyadic death" [6]. This article presents the death of two sisters, who die from a cocaine overdose. In the scene there are some farewell notes, which are interpreted as a suicide pact.

Case Presentation

Information and circumstances of the case

These are two women, 26 and 30 years old, from the capital of the country, who were in the residence of one of the deceased, along with their housemate. According to his account, they were ingesting alcohol and cocaine; at three o'clock in the morning, the companion is absent to rest for three hours and on her return, she finds the sisters "convulsing", so she calls the paramedics, who declare them dead at the scene.

The number one sister presented as a medical history a neoplasm that compromised the central nervous system. In addition, in both cases, information was found related to recent love breaks, which is why they had associated depressive symptoms. It is important to highlight that in the scene a notebook was found with two writings, of different calligraphic origin, which were considered as

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*Correspondence:

Juan Pedro Montoya Ramírez,
Department of Medicine, University
of La Sabana, Colombia, Tel: +57-
8615555-23315;

E-mail: juanmonra@unisabana.edu.co

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farewell notes.

Findings at necropsies

In the case of sister number one, the body of a 26-year-old woman was evidenced, with no signs of medical attention. On internal examination, venous blood flow was found, petechiae in serosa, pulmonary parenchymal edema, generalized visceral congestion and abundant muco-bloody secretion inside the trachea and larynx. Brain was documented with the presence of small masses immersed in the white substance, which compromised left and right frontal region, left temporo-parietal region, and a larger mass in the occipital region, bilaterally compromised.

In the case of sister number two, the body of a 30-year-old adult woman was evidenced, with no signs of medical attention. On external examination, generalized cyanosis was observed, hematoma on the left lateral side of the tongue, with a bite pattern, and blunt trauma of recent appearance in the nasal dorsum, thorax, abdomen and extremities. On internal examination, she presented blood flow, petechiae in serosa, pulmonary edema, generalized visceral congestion and corporeal hemorrhagic gastropathy.

After the autopsy, both cases were studied, and samples were taken for toxicology, biology and histopathology.

Tracing

In both cases, the presence of cocaine and its metabolites was demonstrated in the blood, vitreous humor and nasal smear samples, with a total blood concentration of 1.6 mcg/mL and 2.0 mcg/mL respectively for each case. There was no evidence of ethanol or methanol in blood or vitreous humor samples.

Discussion and Conclusion

In this case, a suicide pact between two sisters is reported, one of which suffered from cancer that compromised the central nervous system; both had suffered recent love breaks and had depressive symptoms at the time of the act. It is difficult to establish whether there was a situation of dominance or manipulation by any of those involved, especially due to the fact that both leave notes that are interpreted as farewell and do not describe a history of previous suicide attempts in either of the two sisters.

Cocaine is one of the substances most commonly associated with overdose deaths with drugs of abuse [7]. The blood cocaine levels found in the samples of both bodies were in lethality ranges. The main

pathophysiological effect of cocaine is high blood pressure, secondary to vasoconstriction, which can lead to death due to respiratory failure, cerebrovascular event, intra cerebral hemorrhage or heart failure; similarly, seizure disorders may occur during consumption [8]. In the two cases presented, nonspecific signs of hypoxia were found at necropsy; these in relation to lethal values of cocaine in the blood, which suggests that acute respiratory failure, caused death in both cases.

In conclusion, in this case there is a violent death type suicide. The circumstances surrounding these events are of vital importance, the notes found played a fundamental role in establishing the context of a suicide pact, in addition the underlying disease and depressive symptoms have been described as factors frequently associated with these pacts [1,9]; in the same way as consanguinity in cases of dyadic death [5]. However, despite the close relationship between cocaine use and suicide risk, its use as a mechanism to generate death is highly unusual [10]. A thorough investigation of the scene is essential to identify such cases.

References

1. Cohen J. A Study of Suicide Pacts. *Mem Acad Chir (Paris)*. 1961;29:144-51.
2. Prat S, Rérolle C, Saint-Martin P. Suicide Pacts: Six Cases and Literature Review. *J Forensic Sci*. 2013;58(4):1092-8.
3. Rajagopal S. Suicide pacts and the internet. *BMJ*. 2004;329(7478):1298-9.
4. Vijayakumar L, Kumar M, Vijayakumar V. Substance use and suicide. *Curr Opin Psychiatry*. 2011;24(3):197-202.
5. Forensis 2018. Datos para la vida. Colombia: Instituto Nacional de Medicina Legal y Ciencias Forenses; 2019.
6. Marcalain EB, Roig IL, Arribas EF, Roca AE. Muerte diádica: suicidio doble de gemelos. *Revista Española de Medicina Legal*. 2011;37(1):30-3.
7. Kosten TR, Kleber HD. Rapid death during cocaine abuse: a form of neuroleptic malignant syndrome? *Am J Drug Alcohol Abuse*. 1988;14(3):335-46.
8. Seijas DB. Adicciones y depresión en la salud del hombre. *Revista Médica Clínica Las Condes*. 2014;25(1):79-98.
9. Rosen BK. Suicide pacts: a review. *Psychol Med*. 1981;11(3):525-33.
10. Sperry K, Sweeney ES. Suicide by Intravenous Injection of Cocaine. A Report of Three Cases. *J Forensic Sci*. 1989;34(1):244-8.