Case Report

Suicide by Amiodarone Poisoning: A Case Report

Gupta BD*, Rathod JS, Mehta RA, Trangadia MM, Vadgama DK

ABSTRACT

A twenty year-old, young, healthy, male paramedical worker was found dead in the toilet of a railway train compartment. One intact and multiple broken ampoules of "Cordarone" along with one 5 mL syringe were found alongside the body. There were two suicide notes present.

At autopsy, no injuries could be noted on the body. Routine viscera sent to a government laboratory for chemical analysis was negative for poison(s). A separate sample of blood was sent to another laboratory for testing for amiodarone. Amiodarone was detected in the sample.

Though available literature mentions some cases of amiodarone ingestion to commit suicide, these were unsuccessful attempts. We could not locate any case of attempted or successful suicide by intravenous use of amiodarone. Being the first of its kind, this case is presented.

Key Words: Amiodarone; Suicide

Introduction

Suicides are common unnatural deaths all over the world. One of the methods of committing suicide is injection of toxic agents into the body.[1,2] Use of medicinal substances such as barbiturates,[3–6] insulin,[7–11] cocaine,[12] skeletal muscle relaxants like suxamethonium[13] and pancuronium,[14] and several other drugs like curare[15] have been reported. Among the non-medicinal substances, snake venom,[16] pesticides,[2] and cosmetics[17] have been used to kill oneself by injection. In one case, insulin was injected in combination with a beta blocker.[11] We report a case of suicide by injection of an unusual drug - amiodarone.

The Case:

A dead body of a male aged about 20 years was sent to our hospital for autopsy from a primary health care centre about 200 km away. The history of the case was that the man was found dead in the toilet of a railway train compartment. Along with the dead body, there were multiple broken, and one unbroken ampoule of "**Cordarone**" (amiodarone). A 5 mL syringe with needle was also found. In Indian railway trains, the commode in the toilet opens to the exterior. Therefore it is not certain whether all that was found was only used, or part of whatever was used could not be found as it may have either been thrown out through the commode, or accidentally gone down due to the movement of the train.

The body was in a state of early decomposition. Rigor mortis had passed off from all over, and features of decomposition (peeling of epidermis, marbling, blisters, foul smell) were present. Eyes were open and corneas were hazy. The tongue was protruding out of the mouth and the face was swollen.

There was a 2x1 cm blackish discoloured area on the right elbow crease. There was also a 1x1 cm blackish discolouration on the back of the right hand. The victim was ascertained to be left handed. These discolourations were deduced to be due to injection marks and spillage of blood into the adjacent soft tissues. Other then these marks, there were no marks of mechanical or asphyxial violence on the body.

Dept of Forensic Medicine, MP Shah Medical College, Jamnagar, Gujarat.
*(*Author for correspondence*): E-mail: bdgujn@yahoo.com

Internally, the organs were decomposing, but did not show any gross evidence of disease. Stomach had about 100mL of liquid material with no peculiar smell. Overall, there was no evidence of any obvious cause of death. The police recovered two suicide notes from the victim written in the local language. One of them had the following lines written: 'I have committed suicide at my own. Don't harass my family members.' It was signed by the deceased. On the back of this slip were the mobile telephone numbers of some family members. The other suicide note was on a larger sheet of paper which contained the following lines: 'I have committed suicide at my own. Don't harass my family members. I have done too much wrong in my life. I am apologizing for that. I want to say that you have cared for me for these many years for that I am thankful to you. After my suicide if you don't care for others, it's alright, but, take care of my mother for sure.' Last two lines of the note mentions the name of a particular clinic where his salary was due. These lines were crossed out. The victim was working as a paramedic in this clinic when he was alive.

Routine chemical analysis of viscera was negative. It is probable that the forensic science laboratory did not test the viscera specifically for amiodarone. As the circumstantial evidence and suicide notes pointed towards suicide by amiodarone, we sent a blood sample to a private laboratory attached to a poison control centre in Cochin, Kerala. It reported the presence of amiodarone in the blood. Quantitative estimation of amiodarone was not possible because of the time elapsed between the collection of sample and testing. Microscopic study of internal organs was non-specific.

Discussion

Commonly available and easily accessible substances are usually used to commit suicide. Occasionally a particular occupation makes an unusual substance easily available, which may be used for committing suicide. In one case, an unmarried woman of twenty three years, a daughter of a screen printer, consumed ammonium dichromate to commit suicide. Ammonium dichromate was available at home as it was used in screen pritnting.[18]

In another case, a nineteen year old probationary nurse consumed formalin, which was available to her in her workplace (hospital) to end her life.[19] Occupations also provide the knowledge about a particular substance as to its toxicity and mode of use.[18,19] Therefore, medicos and paramedical personnel have used medicines commonly to end their lives.[1–4,6,11,13–15] Common knowledge about medicines has also prompted suicides to use them.[7–9] It is common knowledge that injection of certain substances into the body through veins is dangerous, and could be highly fatal.[2,17–19]

Side effects due to amiodarone have been reported due to accumulation of the drug in tissues after loading and daily maintenance doses. Pulmonary fibrosis, corneal micro-deposits, hepatic dysfunction, neurovascular symptoms, photosensitivity and hypo- or hyperthyroidism have been reported on long term use of amiodarone.[20] A few authors[21–24] have reported amiodarone poisoning due to ingestion of overdose of amiodarone. In one case, the consumed dose was as high as 8gm.[23] These patients did show some electrocardiographic changes, but none of them died. When amiodarone is ingested orally, its bioavailability is less. This could be the reason that these patients survived.

Therapeutically, if amiodarone injection is to be given, it is given slowly by infusion over a period of time. Amiodarone has been used to attempt suicide twice by one patient suffering from bipolar disorder.[23] The first time, he was on sertraline and clonazepam. After one year, he ingested amiodarone for a second time, this time with phenobarbitone. He survived both attempts. We could not locate any suicide attempt leading to death by intravenous injection of amiodarone in the available literature. In the case being reported here, the deceased injected the drug intravenously. It is evident that the deceased infused multiple ampoules intravenously, abruptly and rapidly. He was a young adult of twenty years of age, and was not known to be suffering from any heart disorders such as arrhythmias. Overdose of amiodarone introduced suddenly into his circulation caused his death.

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