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Poisoned men as subjects of care and nursing care

Homens envenenados como sujeitos do cuidar e dos cuidados de enfermagem

Hombres envenenados como sujetos del cuidar y del cuidado de enfermería

Júlio César Santos da Silva[1]
Maria José Coelho[2]
Ana Carla Dantas Cavalcanti[3]
Cecília Maria Izidoro Pinto[2]
Maria Soledade Simeão dos Santos[2]
Elza Maria Santos Lima[4]

1. Federal Center of Technological Education Celso Suckow da Fonseca. Rio de Janeiro - RJ, Brazil.
2. Federal University of Rio de Janeiro. Rio de Janeiro - RJ, Brazil.
3. Federal University of Fluminense. Niterói - RJ, Brazil.
4. University of Rio de Janeiro. Rio de Janeiro - RJ, Brazil.

Abstract

Objective: Characterize and analyze carbamate ("*Chumbinho*") poisoning in men. **Methods:** Multiple case study using non-participant observation, conducted in five men treated at an emergency service. Data analyzed by means of thematic analysis, using the software Atlas.ti version 6.2. **Results:** The age range varied between 28 and 52 years. Self-ingestion was predominant. All men were unemployed. Three were single. All men arrived dirty, defecated, urinated, spitted, vomited and with food waste on their body. They needed oral and bodily hygiene care, exchange of dirty clothes for clean and dry ones and body warming. **Conclusion:** This study supports the principles of PNAISH by identifying that the male population only accesses the health system through specialized care. All cases of poisoning were through the oral route. Limitations included the impossibility to cover all poisoning cases and the fact that the victims visited the emergency upon spontaneous demand.

Keywords: Nursing; Man's health; Poisoning; Emergencies.

Resumo

Objetivo: Caracterizar e analisar os envenenamentos por carbamato ("chumbinho") em homens. **Métodos:** Estudo de casos múltiplos através de observação não-participante, realizado em cinco homens atendidos em um serviço de emergência. Dados analisados através de análise temática, utilizando-se o *software* Atlas.ti versão 6.2. **Resultados:** A faixa etária variou entre 28 e 52 anos. Predominou a autoingestão, todos os estavam desempregados. Três eram solteiros. Todos apresentavam-se sujos, evacuados, urinados, com saliva, vômito e resíduos alimentares pelo corpo. Necessitavam de cuidados de higiene oral e corporal, troca das roupas sujas por outras limpas e secas e de aquecimento corporal. **Conclusão:** Este estudo corrobora os princípios da PNAISH ao identificar que a população masculina somente acessa o sistema de saúde por meio da atenção especializada. Todos os casos a via de intoxicação foi a via oral. Evidenciou-se como limitações a impossibilidade de abranger a totalidade das intoxicações e o fato das vítimas serem de demanda espontânea na emergência.

Palavras-chave: Enfermagem; Saúde do homem; Envenenamento; Emergências.

Resumen

Objetivo: Caracterizar y analizar los envenenamientos por carbamato ("*Chumbinho*") en hombres. **Métodos:** Estudio de casos múltiples por medio de la observación no participante de 5 hombres atendidos en un servicio de emergencia. Los datos fueron analizados mediante el análisis temático con el *software* Atlas.ti versión 6.2. **Resultados:** Todos eran desempleados, con edades entre 28 y 52 años. La auto-ingestión fue predominante. Tres eran solteros. Todos estaban sucios, evacuados, orinados, con saliva, vómito y residuos de alimentos en el cuerpo. Necesitaban cuidados de higiene oral y corporal, cambiar la ropa sucia por otras limpias, secas y de calentamiento corporal. **Conclusión:** Este estudio corrobora los principios de PNAISH al identificar que la población masculina sólo accede al sistema de salud a través de la atención especializada. Las intoxicaciones fueron por vía oral. Se evidenciaron como limitaciones la imposibilidad de atender todas las intoxicaciones y las víctimas constituyeren demandas espontáneas en la emergencia.

Palabras-clave: Enfermería; Salud del hombre; Envenenamiento; Urgencias Médicas.

Corresponding author:
Júlio César Santos da Silva.
E-mail: jcesarsantos@gmail.com

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INTRODUCTION

Among the countless daily situations experienced in emergency care in health institutions, poisonings are constant, representing a relevant number of cases, especially those deriving from carbamate ingestion, also known as "*chumbinho*". This substance, although mistakenly known as rodenticide, is illegally sold; in solid, granular form; its color ranges from grey to black and it mostly consists of carbamate, whose use became popular in large urban centers[1].

In the context of emergency care in general and nursing care in particular, the professionals consider a care reality that characterizes victims of carbamate poisoning at an imminent risk of death, due to a series of signs and symptoms that demonstrate the complexity of care delivery to people in that situation. It should be highlighted that the distribution of mortality across the cities in the State of Rio de Janeiro demonstrated a higher incidence of carbamate ingestion cases in the metropolitan region of the State.

In addition, an analysis of the City of Rio de Janeiro shows that the neighborhoods with a Low Human Development Index (HDI) showed the highest frequency of death, based on which it can be inferred that there is a relation between the incidence of poisonings and the HDI[2]. In other words, people living in places with a low HDI are more susceptible to carbamate poisoning in view of the need to combat rodents, even if the product is purchased and used irregularly.

In view of the importance of avoiding accidents deriving from the accidental intake of this drug; reducing the number of self-extinction attempts, as well as homicide attempts involving the use of this agent, the profile of poisoning victims needs to be disseminated to allow nursing to outline conducts for care to this population.

The National Policy for Integral Care to Man's Health (PNAISH)[3] emphasizes the need for a paradigm change with regard to the male population's perception of care for their own and their family's health. Besides the educational aspects, among other actions, the public health services need to be organized to welcome and make men feel part of them.

This research is part of the Master's thesis entitled man's health policy: Emergency Care and Nursing Care to male victims of exogenous Carbamate ("*Chumbinho*") poisoning[4].

In view of the problem, and considering that men are the most frequent victims of this condition, the study objectives were established as follows: characterize and analyze exogenous carbamate ("*chumbinho*") poisoning in men. Thus, this study can support teachers and students' discussions on emergency care, mainly in Man's Health, also supporting training proposals for emergency care teams, recycling and qualification courses and the dissemination of this knowledge to the community.

METHOD

An exploratory and descriptive case study was undertaken of the phenomenon of exogenous carbamate ("*chumbinho*") poisoning, with a qualitative approach. The case study is defined as an empirical research that investigates a contemporary phenomenon in its natural contexts, in situations in which the borders between the context and the phenomenon are not clearly evident. In this study, the multiple case study method was applied, a variant of the same methodological structure, due to the fact that the evidence from multiple cases is often considered stronger, so that the study is considered more robust[5].

The study scenario was the Red Room of the Emergency Service of a Municipal Hospital located in the metropolitan region of Rio de Janeiro, with a large care flow. The inclusion criterion was, being a man between 20 and 60 years of age, with a history of intentional or accidental carbamate intake, having ingested the product less than 12 hours earlier.

The data were collected between May 28th and November 2011, using a field diary and a data collection instrument for non-participant observation, based on the instrument used and validated by Coelho[6]. To preserve the secrecy and the subjects' anonymity, the victims received a pseudonym: case 1: Pedro, case 2: André, case 3: João, case 4: Tiago; and case 5: Filipe. Fifteen visits took place, totaling 58 hours of observation, with a mean during of 3 hours and 50 minutes each. Based on the field diary and the non-participant observation script, the records and the subjects' description were possible.

The data were analyzed in the light of the concepts of Emergency, the nursing care typology, considering not only the appropriateness to the study theme, but also the possibility to clarify doubts deriving from nursing practices; and the concept of masculinity[6,7]. The software Atlas.ti version 6.2® was used, which is a qualitative data analysis program.

The research was submitted to the Research Ethics Committee of the Municipal Health and Civil Defense Secretary - RJ and received approval in Opinion 35 on April 25th 2011. This study complied with the premises of CNS Resolution-196/96.

RESULTS

As the starting point for this characterization, in Table 1, the data are presented on these victims' age range, which varied between 28 and 52 years. The study subjects

received immediate help from the Military Fire Brigade of the State of Rio de Janeiro (CBMERJ) and the Emergency Mobile Care Service (SAMU), with only one case of help from neighbors, thus proving the presence of the public emergency care services for the population.

Concerning the subjects' marital status, three were single, one was married and the other lived with a fixed partner. In all cases, the ingestion route was oral. In one of the cases, however, self-intoxication did not occur, but was due to the consumption of food offered by an unknown person. The most noteworthy physiological alteration related to the carbamate poisoning was transitory hyperglycemia, which was present in three cases, ranging from 102 mg/dl to 282 mg/dl. As regards the occupation, it is remarkable that all patients were unemployed or depended on informal jobs for survival.

Upon admission, four subjects were accompanied by personal acquaintances. Among the factors preceding the poisoning, depression, a previous suicide attempt, illegal drugs use and marital and/or family conflicts can be highlighted, which were present in most of the subjects studied, as the following excerpts characterize.

> *Neighbor mentions that André lives alone and had already tried to commit suicide (André).*
>
> *João was depressed, he wanted to kill himself and supposedly took "chumbinho" (João).*
>
> *Filipe does drugs and constantly lives in conflict with his mother and brothers. He was determined to take "chumbinho" to kill himself (Filipe).*

In Table 2, the substances administered during emergency care are described. The use of 0.9% saline solution and intravenous atropine at regular intervals was recurrent.

In all cases, the men were wearing dirty and wet clothes and, in part of the cases, they had urinated on themselves and their clothes and body showed food remains, not as a result of personal characteristics, but an effect of the carbamate poisoning, which causes sphincter release, drooling, sweating and vomiting, as characterized in the following excerpts.

> *Pedro was wearing blue shorts and shirt, his general appearance was good, median height, nails and hair taken care of, drooling, agitation, muscle fasciculations, urinated clothes and difficulty to speak, disoriented, reduced awareness, not responding to simple commands, myotic pupils, respiratory auscultation with rumbles in the bases, increased peristalsis, cold skin (Pedro).*
>
> *Upon admission, André was using a nasogastric tube, used for the gastric wash. Tall, wearing jeans shorts, a green T-shirt and no shoes. Secretive, myosis, drooling, pulmonary rumbles and increased peristalsis, tachycardic, cold skin and pale (André).*

The circumstances of the emergency care directed the treatment and nursing care towards these men's needs. In this line of reasoning, the cases could be described with regarding to the poisoning route, capillary glucose levels, the victims' hygiene and the substances administered during emergency care, as well as cases of repeated self-intake of "*chumbinho*".

DISCUSSION

A literature review shows that the PNAISH was established through a strategic cutout of the adult male population between 25 and 59 years of age[3]. These are adult men in the active labor phase, who more frequently die due to poisoning, with a greater concentration of deaths in adults between 20 and 59 years of age, whose type of exposure was intentional/suicide.

Table 1. Distribution of victims' characteristics

Case	Age (years)	First aid	Marital status	Route	Glucose (mg/dl)	Occupation	Companion	Factor preceding the poisoning
1	45	CBMERJ	Fixed partner	Oral	282	Unemployed	Girlfriend	Misunderstanding in relationship
2	52	SAMU	Single	Oral	202	Unemployed	Neighbor	Previous suicide attempt
3	41	CBMERJ	Married	Oral	118	Unemployed	Friend	Depressive and wanted to kill himself
4	28	CBMERJ	Single	Oral	102	Unemployed	No companion	Intake of snack given by an unknown person on the street
5	39	Neighbors	Single	Oral	190	Unemployed	Neighbors	Illegal drugs user, lives in conflict with the family.

Research data, 2012.

Table 2. Distribution of victims' description factors

Case	Administered substance	Presentation of victim	Hygiene aspects
1	0.9% saline solution and atropine	Dorsal decubitus position, contained to the bed, not monitored, disoriented, agitated, reduced awareness, not responding to simple commands, spontaneous eye opening, contracted pupils, reacts to pain, mobilizes four segments.	Secretive and urinated
2	0.9% saline solution and atropine	Found dropped, secretive, moaning and with 01 empty bottle of "*chumbinho*". Wore jeans shorts, green T-short and no shoes.	Secretive and wearing dirty clothes
3	0.9% saline solution and atropine	Wore very dirty white shirt, jeans trousers and very dirty and wet sneakers, urinated and with secretion on the face and body.	Dirty and wet clothes, urinated and with secretion on the face and body
4	0.9% saline solution and atropine	Wore black shirt and coat, red trousers on top of beige shorts and two socks, all dirty and wet, bed general hygiene conditions, urinated and large quantity of secretion on the face and body.	Dirty clothes, bad general hygiene conditions, urinated and with secretion on the face and body
5	0.9% saline solution and atropine	Dropped on a public road unconscious, with vomit all over the body, wore blue T-shirt, black shorts and white sneakers, all dirty and with food residues, defecated and urinated.	Dirty, defecated, urinated, vomit all over the body, dirty clothes and with food residues

Research data, 2011.

It was evident that the most used self-poisoning route was oral, a recurrent fact in the literature[8-13].

Different circumstances can increase the risk of suicide in men and women, as they are sources of stress: unemployment, retirement, being on medical leave, poverty, loss of a loved one, misunderstandings with relatives or friends, ending of an affective relationship, legal or job problems[14,15]. Based on this information, the subjects' vulnerability in this study is supported by the literature, as well as the cases of repeated self-ingestion of "*chumbinho*".

The literature describes that men's personal and social behaviors predispose to suicide, such as competitiveness, impulsiveness and greater access to lethal technologies, and they are even more sensitive to economic instabilities, like in cases of unemployment and impoverishment[15].

It cannot be denied that professional activities stand out among male concerns, mainly in people with low social conditions, which strengthens men's historical role as family providers[3]. In that sense, masculinity is considered as a historical and sociocultural construction, whose signification is a process under permanent construction and transformation.

The literature confirms that the victims mention intra-family conflicts as a reason for suicide attempts, highlighting fights/discussions with parents, conflicts with the boy-/girlfriend or partner, separation or the end of a relationship[16]. Except for repeated suicide attempts, marital and family conflicts and the use of illegal substances were present in the five cases studied.

It is important to highlight that, even for those risk factors that are most discussed in the literature, such as unemployment, behavioral disorders and previous self-ingestion attempts, little is known about the interaction between these events and the mechanisms through which they operate[16].

Carbamate intoxication is one of the main causes of accidental poisoning or forms of suicide attempt among young people and can cause severe symptoms and complications. Therefore, raising the population's awareness about the use of products whose composition contains carbamate is fundamental, showing the need to intensify the surveillance of its trade[13].

Nowadays, Internet serves as a new means for the dissemination of clandestine substances, which together with illegal informal salesmen and stores reselling these products contribute to the worsening of the illicit scenario, furthering the broad and easy access to different dangerous substances[17].

Concerning the aspects related to the victims' bodily hygiene, as perceived, they were dirty, defecated, urinated, drooling, vomited and had food remains across their body. Therefore, the care process implies various technical and informative activities to the client, one of which is to implement nursing actions to attend to all basic human needs involved. Therefore, among others, the nursing team needs to provide for what is necessary to accomplish the bodily hygiene care of the victims under their care[6].

For the sake of a better understanding and case description of the men attended in the Red Room of the Emergency

Service, the factors need to be recognized that preceded the intoxications, as well as the men's appearance.

As evidenced, self-ingestion was the main circumstance of the poisonings. This fact may be associated with the population's knowledge about the highly toxic power of these substances and the easy access to these products, turning them into a dangerous weapon, mainly for people who attempt to commit self-extinction[12].

Self-inflicted intoxications caused by pesticides showed to be more severe and lethal than accidental intoxications[18]. This phenomenon can be explained by the amount of the substance ingested.

Concerning men's health, the factors related to the poisonings are noteworthy: living alone, being depressed and using drugs. The motives for the suicide attempt the adults alleged referred to marital and/or financial problems. Almost all the cases of self-provoked intoxications by "*chumbinho*" occurred in the urban region[13].

In Brazil, 7.4% of all male deaths due to external causes were related to suicide, showing a slow and irregular evolution. Its frequency drops as from the age of 45 years, but a higher incidence is found in the age range from 25 till 29 years[3].

Concerning the victim's appearance, the men who were victims of exogenous intoxication by "*chumbinho*" arrived at the Emergency Service in the state they were in at the moment of the intoxication. In the cases described, the aspects related to the men's personal appearance, i.e. their self-image should be observed.

Another relevant finding relates to the organic signs and symptoms the men who were victims of carbamate intoxication manifested during care in the Red Room. It should be kept in mind that the start of the exacerbated signs and symptoms depends of the length of exposure, the dose and the administration route. In the cases studied, vomiting was the most common sign, accompanied by nausea, myosis and drooling.

The first signs emerge within 15 to 30 minutes after the oral administration. The fastest symptoms are due to inhalation, while the slowest are related to dermal exposure, conditions registered in the field diary.

Due to the symptoms the victims displayed during initial care in the Red Room, nursing care was needed to revert the symptoms, through procedures that follow technical and diagnostic standards.

Accidental poisoning due to "*chumbinho*" and self-intake attempts, mainly in the adult population, are considered an important cause of morbidity and mortality in Brazil[17]. The literature consistently highlights that the general treatment measures are based on procedures inherent in emergency care to victims of exogenous carbamate intoxication, and are strictly aimed at guaranteeing the reestablishment of the victim's vital functions, and also at reverting the cholinergic muscarinic syndrome triggered through the reduction of acetylcholinesterase, and the consequent rise in acetylcholine not linked to a receptor at the synaptic cleft.

CONCLUSION

This study supports the principles of the PNAISH[3], identifying that the male population only accesses the health system through specialized care. The case analysis showed important aspects of the male poisoning victims. The generalization of the sample revealed that the age range varied between 28 and 52 years. In most of the cases studies, the men received first aid from public emergency care services, were single and all of them were unemployed.

Based on the multiple clinical case study, it could be identified that, in all cases, the intoxication route was oral, and that most of the men intentionally ingested the product. As regards the hygiene aspects, they were wearing dirty clothes and were vomited, urinated and defecated, as a result of the exacerbated signs and symptoms of carbamate intoxication, which cause drooling, sweating and the release of the urinary and anal sphincters.

Concerning the causal factors of the intoxications, earlier cases of self-ingestion were found due to the desire to commit suicide in most of the cases studied. One of these men, however, was poisoned by a third person.

The basic human needs for hygiene and comfort were fundamental in all cases, as all of the men were dirty and wet. In these conditions, besides bodily and oral hygiene, the men who were victims of carbamate intoxication needed to change their dirty clothing for clean and dry clothes and also needed body warming.

Finally, it should be highlighted that, although this research discussed both exogenous intoxication by Carbamate ("*chumbinho*") and men's health, these themes could not be exhausted, as plenty remains to be explored, mainly regarding the latter, considering aspects of their vulnerability and social and economic losses.

The impossibility to consider all carbamate intoxications in all hospital services was considered a limitation. Nevertheless, the study of multiple clinical cases can be representative of the population of victims of poisoning by "*chumbinho*". Another limitation was related to the fact that the victims studied visited the emergency service spontaneously, so that their arrival at the sector to receive care could not be anticipated.

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