

DRUG POISONING FROM 2016 TO 2021 IN CEARÁ, BRAZIL

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Abstract: Drug poisoning has an important impact on the health of the population and can lead to death, as wrong doses or without prescription (self-administration) can cause serious problems, being, therefore, a serious Public Health problem. This study aimed to evaluate the epidemiological profile of drug intoxications from 2016 to 2021 in the state of Ceará, Brazil. This is an epidemiological, ecological study with a quantitative approach. In which, it was carried out by obtaining data on the year of notification; gender, age group and circumstances on the website of the Department of Informatics of the Unified Health System. In total, 8,431 drug intoxications were recorded in the state of Ceará during the study period. The year 2019 was the one with the most cases, the highest frequency of poisoning was in females, with 71.94% of notifications, with the age group from 20 to 39 years the most affected, with 43.52% of occurrences. Most cases were due to attempted suicide (67.28%). Drug intoxications result in an important factor that causes premature death and, consequently, there is social and economic loss for society because it is not possible to measure human life in monetary value. Thus, pharmacovigilance actions are necessary, since intoxications are recurrent and require preventive and educational actions focused on the most frequent victims and circumstances. **Keywords:** Epidemiology, toxicity, Drug overdose.

INTRODUCTION

Poisoning can be considered clinical manifestations, which respond to the toxicological effects of the organism's relationship with an exogenous chemical substance, normally occurring by ingestion or contact of the toxic substance in the mucosa, eyes or skin (FREITAS AB, et al., 2020).

Thus, it can be mentioned that drug

intoxication is characterized by the worsening of the signs and symptoms caused by the drug when it is inhaled, ingested, injected or in contact with the layer of the skin, eye or mucous membranes, and in these cases its concentration is higher than that established therapeutically (SANTOS VA, et al., 2017).

Furthermore, toxic effects are mainly caused by drugs, and the incidence of exogenous intoxications is very high (SOUSA ESF, et al., 2020). These drug intoxications can be classified as acute or chronic and may cause mild to severe clinical conditions. Those classified as acute are usually caused by a single exposure to the toxic agent, but can also occur from more than one exposure to that agent, provided it occurs within an average of twenty-four hours. Since, in this type of intoxication, identifying and associating the cause with the deed is possible more easily and, this way, the diagnosis will also be made easily, since the causative agent is already known. Chronic intoxication, however, results from the toxic effect after exposure to one or more agents for prolonged periods, in which the doses of the agents are cumulative (MENDES LA, et al, 2017).

Another important point is the possibility of chronic intoxications reaching the largest organic systems, including the nervous, cardiovascular, endocrine and hematological systems, as well as the possibility of manifesting, also, various outcomes such as the appearance of tumors, kidney and endocrine diseases, hepatic, neurological, congenital, immunological, among others. Thus, the diagnosis of cases with long periods of exposure requires more attention, as some of these chronic intoxications may occur together with cases of acute effect (RANG HP, et al, 2007).

Among the main causes of drug intoxication in Brazil, accidental self-administration, poor administration and suicide attempts

stand out. The country ranks fifth among the countries with the highest consumption of drugs in the world, as a large part of the Brazilian population self-medication. This accounts for 35% of total drug sales in the country (DOMINGUES et al., 2017; SOUSA ESF et al., 2020).

For the World Health Organization (WHO), self-medication refers to people who choose and use drugs to treat symptoms and diseases without consulting health professionals specialized in these functions, thus including the self-care stage. At the community level, rational self-medication can save resources for treating minor illnesses and can also reduce absenteeism due to minor illnesses. However, self-medication has inherent risks, although it is an important form of self-care for the population (DOMINGUES et al., 2017).

The present study aimed to evaluate the epidemiological profile of drug intoxications from 2016 to 2021 in the state of Ceará, Brazil.

METHODOLOGY

This is an ecological quantitative epidemiological study, carried out by collecting secondary data from the Notifiable Diseases Information System (SINAN) available on the website of the Department of Informatics of the Unified Health System (DATASUS).

The present study was based on the collection of information on drug intoxications reported in the state of Ceará, from 2016 to 2021, according to: the year of notification; gender; age group and circumstances. The data were tabulated in Excel® and the graphics were prepared in this program. As this is a study carried out exclusively with secondary data and in the public domain, it was not necessary to submit and approve it to the Research Ethics Committee (CEP) or the Local Scientific Commission, as recommended by the National Health Council in its Resolution Number 510/ 2016.

RESULTS

During the years 2016 to 2021, 8,431 cases of drug intoxication were reported in the State of Ceará, Brazil. Most cases occurred in 2019, with 28.06% records (Graph 1).

Females obtained 71.94% (6,064/8,431) of the records (Graph 2).

With the present study, it was possible to note that people aged between 20 and 39 years were the most affected, with 3,669 reported cases, representing 43.52% of the total (Graph 3).

According to the circumstance, it was possible to observe that 67.28% (5,672/8,431) of the records were due to a suicide attempt (Graph 4).

DISCUSSION

According to Silva and Costa (2018), medicines are the first agent involved in cases of exogenous intoxication. This fact is due to the ease of access to them. Klinger (2016) also states that medication consumption has grown exponentially in recent years, already being considered a customary practice in the population, even related to abusive use.

The World Health Organization states that even though medication is the most effective therapeutic means, its improper use interferes with health and the economy (ROSA et al., 2015).

Mendes and Pereira (2017) state that the Northeast ranks first in terms of the fatality rate after drug intoxication. This is due to the fragility of health services and limited access of the population to medical care.

The participation of female patients was quite representative in the referring study, such results are similar to the results of Matos, Rozenfeld and Bortoletto (2002), in which women were more susceptible to exogenous intoxications, evidencing intoxication as the main factor. drug.

For Morais et al. (2008), the occurrence of

drug poisoning in females is primarily due to the habit of self-medication. One explanation for the act of suicide attempts is the fact that women are more prone to depressive symptoms, such as hypochondria, hysteria and hypomania.

In the present study, it was observed that most of the causes of intoxication occurred in the economically active population and derive from suicidal motivations. According to Oliveira and his collaborators (2015), it is understood as a conscious and unconsummated action of self-destruction. This act may be related to both varied sociodemographic factors, but a higher occurrence is observed in women and young people.

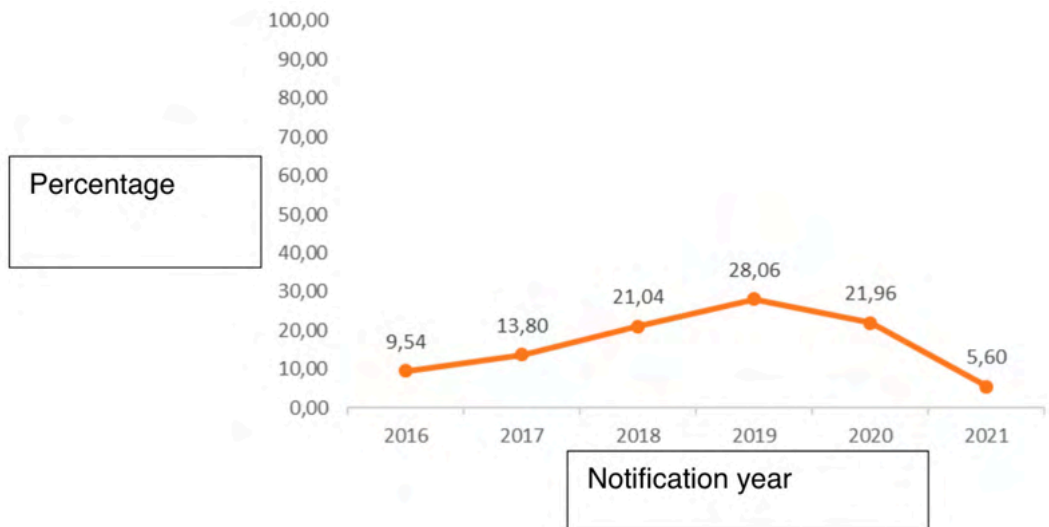
The literature points out that female suicide is a very intense grouping with relational and family issues. Marriage is the main motivator for the suicide attempt. This reason was not evidenced in this study, since this variable was not included in the notification form.

As in the findings presented in this trial, Veloso et al. (2017), a found that most cases occurred in individuals between 20 and 39 years old. The main motivations for this age group are related to the abusive use of medication, resulting from stressful life events. The exemplified data conglomerates demonstrate the importance of interference in the areas of prevention and health promotion, as well as the development of regulatory devices in the country.

CONCLUSION

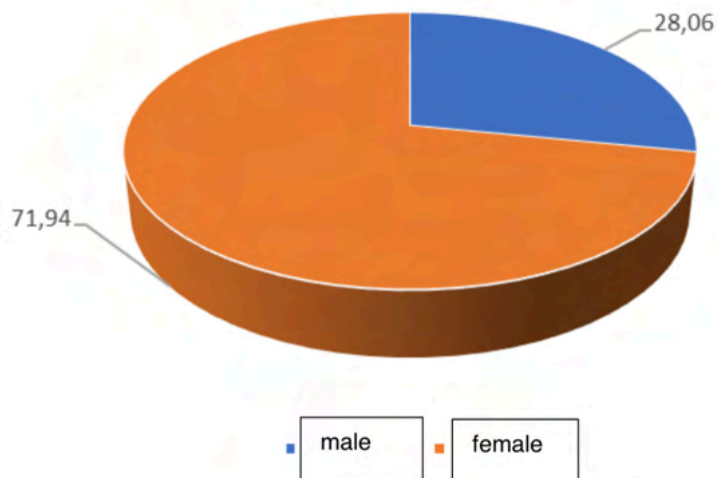
Judging by the epidemiological characteristics, the occurrence is predominantly in the year 2019, in females, aged between 20 and 39 years, and the main cause of intoxication is the suicide attempt.

Drug intoxications result in an important factor that causes premature death and,



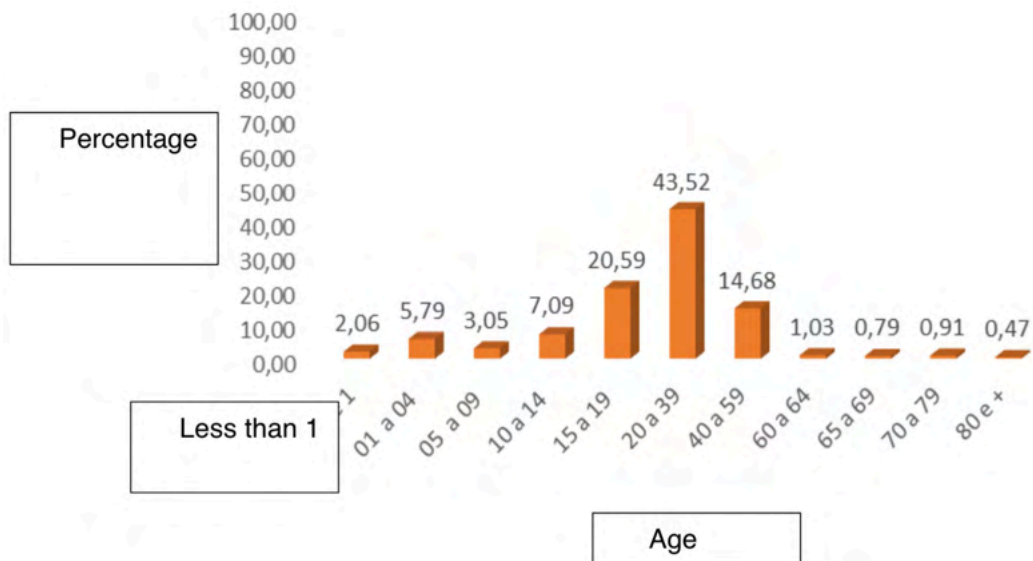
Graph 1: Percentage of cases of drug intoxication reported from 2016 to 2021 in the State of Ceará, according to the year of notification.

Source: Ministry of Health/SVS - Notifiable Diseases Information System - Sinan Net (2022).



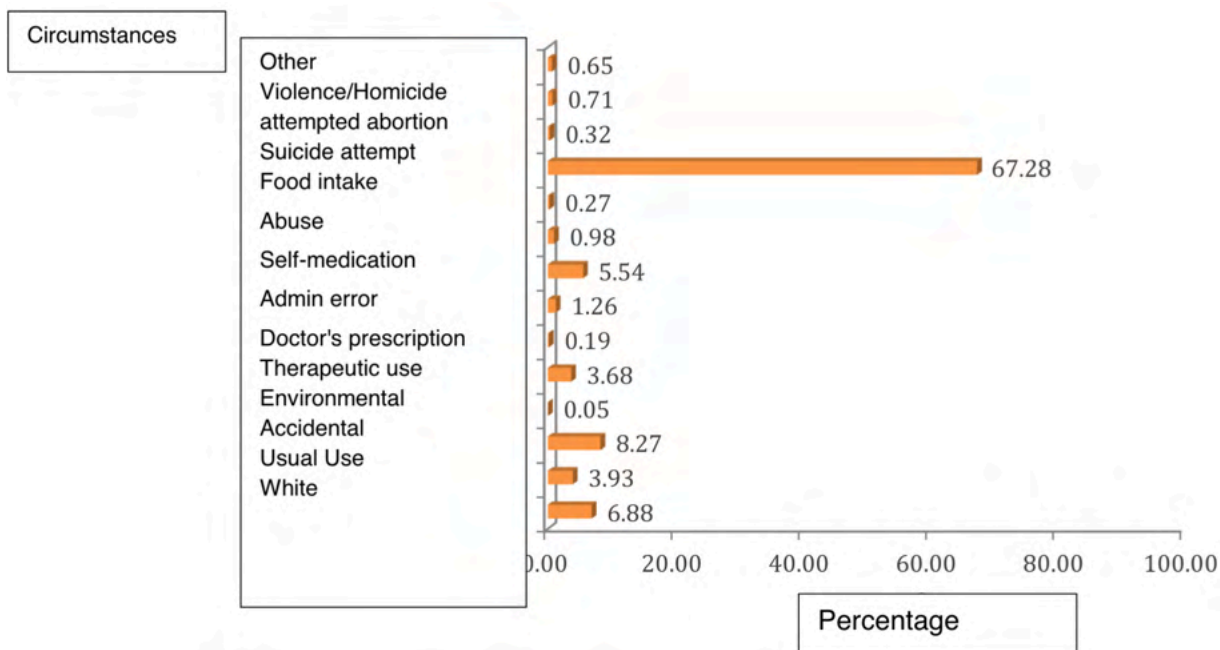
Graph 2: Percentage of cases of drug intoxication reported from 2016 to 2021 in the State of Ceará, according to gender.

Source: Ministry of Health/SVS - Notifiable Diseases Information System - Sinan Net (2022).



Graph 3: Percentage of cases of drug intoxication reported from 2016 to 2021 in the State of Ceará, according to age group.

Source: Ministry of Health/SVS - Notifiable Diseases Information System - Sinan Net (2022).



Graph 4: Percentage of cases of drug intoxication reported from 2016 to 2021 in the State of Ceará, according to the circumstance of intoxication.

Source: Ministry of Health/SVS - Notifiable Diseases Information System - Sinan Net (2022).

consequently, there is social and economic loss for society because it is not possible to measure human life in monetary value. Thus, pharmacovigilance actions are necessary, since intoxications are recurrent and require preventive and educational actions focused on the most frequent victims and circumstances.

The data obtained emphasize the importance and need for more precise and effective measures for the correct use of medicines. In addition to educational actions, which are essential to guide people in understanding the risks of self-medication, accidental use and overdose, a cultural issue that requires study and intervention.

Health professionals must be more involved in providing and clarifying information about the correct use of medicines and in filling out the notification forms correctly and accurately, constituting important actions that need to be optimized for a better interpretation of the epidemiological profile of the disease in question.

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