

Analysis of the Abuse of Legal Drugs as Prevention to Illness in the Brain

Jesús Cuéllar Álvarez

University Central Marta Abreu de las Villas, Cuba

**Corresponding Author: MSc. Jesús Cuéllar Álvarez. Clinical health psychologist University Central Marta Abreu de las Villas, Cuba.*

ABSTRACT

Background: the abuse of legal drugs as the tobacco and the alcohol constitutes factors of risks before illnesses in the brain being of interest in the medical practice.

Objective: to analyze of the abuse of legal drugs as prevention to illness in the brain.

Method: a case-control study was conducted in patients with hypertensive cerebrovascular disease to identify the risk factors related to the appearance of the disease. The patients were selected at random 1:1 (70 cases/70 controls). The following risk factors were analyzed: male sex and toxic habits.

Results: it was observed that males almost fivefolded the risk of hypertensive acute cerebrovascular disease (OR 4.77; CI 95 % 2.20-10.42) and similar age [OR 4.61; CI 95 % 2.07-10.39], smoking doubled the risk (OR 2.44; CI 95 % 1.09-5.5), and alcoholism threefolded it (OR 3.42; CI 95 % 1.16-10.53).

Conclusion: it was concluded that the male sex, aging, the toxic habits, and the premorbid factors are associated with the appearance of ACVD. The time of evolution of hypertension and its severity are directly proportional to the risk of occurrence of the acute cerebrovascular disease.

Keywords: acute cerebrovascular disease; arterial hypertension; factor of risk.

INTRODUCTION

Acute cerebrovascular diseases (ACVD) represent 50% of the neurological problems that occur in hospitals in the United States, ¹ occur 500 000 cases each year, of which 175 000 die. In Spain, it causes death to more than 137 patients per 100 000.³ In countries of the Americas, such as Colombia, ² also represents the third cause of death.

In Cuba, since the 1960s, ECVA has become the most frequent cause of neurological disease and the third cause of death. The 10% of deaths that occur between 40 and 65 years of age are due to them, causing the death of more than 50.2 Cubans per 100 000 inhabitants in 2001, although in our province this figure was somewhat lower : 44.4 deaths per 100,000 inhabitants.^{3,4}

There are many risk factors that have been identified to suffer from ECVA, most of which are common to other diseases of a vascular nature, but in the foreground is high blood pressure (HTA).⁵

Although the aforementioned factors must be considered when assessing individual risk and establishing intervention plans, their

relationships with arterial hypertension are very important both quantitatively and qualitatively.⁶

From a current problem and taking into account that there are still divergences of criteria regarding the contribution of the different risk factors in the appearance of the hypertensive EVCA, it is decided to raise the scientific problem and the general objective of the present investigation.

Clara The phenomenon that exists around this real problem, conditioned the position of the following scientific problem in the present investigation: ¿How to analyze of the abuse of legal drugs as prevention to illness in the brain?

General objective: To analyze of the abuse of legal drugs as prevention to illness in the brain.

METHODS

An analytical study of cases and controls was performed in patients with hypertensive cerebrovascular disease, admitted to the "Celestino Hernández" Hospital of Santa, in the period from June 2017 to September 2017. The patients were randomly selected in proportion 1: 1 (70 cases)

Theoretical Level

Analytic synthetic: It facilitated the interpretation of the texts and to establish the corresponding generalizations. Inductive-deductive: facilitated to go of the peculiar to the general thing in each one of the analyses carried out in the theoretical study. Generalization: It allowed the establishment of the regularities that showed in the carried out study.

Empiric Level

Individual clinical histories: It facilitated to offer information on diverse personal aspects of health in the patients.

Interviews structured: It contributed to identify the factor of risk in the patients.

The selection was based on the following approaches:

Inclusion Approaches

- Paciente con diagnóstico de hipertensión arterial previo dado en su área de salud y con cifras = 200/120 mmHg.
- That they offer their informed consent to participate in the investigation

Exclusion Approaches

- Patient that shows any entity (diabetes mellitus, IRC, treatment with cytostatics,

metabolic diseases, malignant hematological neoplasms, cardiomyopathies and cardiac dysrhythmia, ingestion of drugs, vasculitis due to any cause) that could cause an ECVA.

- That they don't offer their informed consent to participate in the investigation.

Exit Approaches

- Patients that abandon the investigation voluntarily.

Collection of the Information

The data were collected by the authors through the questioning and physical examination of the patients, review of hospital and ambulatory medical records and, finally, they were recorded in the data collection form.

Statistical Analysis

The statistical analysis was based on a univariate strategy that consisted in the determination of the odds ratio (OR) for each of the hypothetically influential risk factors in the damage to target organs due to hypertension, as well as in the estimation of their confidence intervals at the 95% (95% CI). For each of the risk factors, the hypothesis that the population OR was significant greater than 1, statistical significance level of $p < 0.05$, was approved. The statistical package EpiInfo 2000 was used).

RESULTS

Table1. Sociodemographic factors and acute cerebrovascular disease

Variable	Cases		Control		Odds ratio (OR)	Confidence interval (IC 95 %)	p
	No.	(%)	No.	(%)			
	N = 70		N = 70				
Sex							
Male	49	68,1	23	31,9	4,7	2,20-10,42	0,000
Age							
= 65	55	63,9	31	35,2	4,61	2,07-10,39	0,000

Source: Interviews structured

Acute cerebrovascular disease is a common entity in our environment, hypertension is the most frequent cause, especially when cardiovascular risk factors coincide. In this

study it is shown (table 1) that the male sex almost quintuple the risk of hypertensive ACEV (OR 4.77, 95% CI 2.20 - 10.42) and age behaves similarly (OR 4.61 95% CI 2.07 - 10.39).

Table2. Toxic habits and acute cerebrovascular disease

Variable	Cases		Control		Oddatios (OR)	Confidence interval (IC 95 %)	p
	No.	(%)	No.	(%)			
	N = 70		N = 70				
Tobacco							
Alcoholismo	17	73,9	6	26,1	3,42	1,61-10,53	0,012

Source: Individual clinical histories

Regarding toxic habits (table 2), they are important risk factors for the disease under study; smoking doubles the risk (OR 2.44, 95%

IC 1.09 - 5.5) and alcoholism triples it (OR 3.42, 95% IC 1.16 - 10.53).

DISCUSSION

The wide knowledge of the risk factors for diverse diseases allows the health systems to draw up strategies in order to strengthen the medical attention and achieve the reduction of the incidence of many noxious Bembibre and others⁹ found discrete predominance in males; In a prospective study conducted in Massachussetts, men were cited as the most frequently affected.⁹ These results coincide with the results of the investigation.

Smoking is a risk factor for cardiovascular diseases, it increases its harmful effect if it is associated with HBP since there is evidence that between both factors there are obvious connections, which mean that we can even postulate that smoking is an important factor in smoking. risk for hypertensive ECVA, by compromising the control and prognosis of the hypertensive patient.¹⁰ Baena Diez and others¹¹ report an OR with addition of organic damage in smokers, as well as the results of this series.

Many patients are convinced that alcohol consumption has a beneficial effect on the cardiovascular system, however the reality is another, the association between toxic habit and cerebral ischemic or hemorrhagic lesion is high in the hypertensive.¹² Alcohol can cause acute cerebral vasoconstriction and lead to ischemic phenomenon, another effect would be increased systolic hypertension, facilitating vascular rupture and the consequent subarachnoid hemorrhage or parenchymal hematoma.¹²

The time of evolution of hypertension has been associated with hypertensive ECVA, López Rodríguez¹³ and his group found an association between the time of hypertension and the organ damage, where patients with 10 years or more of severe hypertension had a risk of 30% or more to develop injury to target organs. Arrozola and other¹⁴ and Conde-Sendín and others¹⁵ report OR similar to ours, where patients with more than 15 years of disease evolution showed a higher risk of ECVA. The HTA, depending on its evolution and magnitude, causes structural and functional alterations of the cerebral circulation that favor brain injury.

There are reports that the more severe the arterial hypertension, the greater the organic lesion will be. The clinical consequences of the vascular remodeling associated with the sustained elevation of blood pressure will be different depending on the type of vessel, while the loss of the elasticity of the great arteries

implies a decrease in its buffering capacity, stiffness in the aorta or its branches. They favor the development of left ventricular hypertrophy and the involvement of small vessels causes hypo perfusion of organs and ischemia, which favors the brain accident.¹⁶ These facts may well explain our findings and those of other revised literatures¹⁷ that cite results similar to those found in this series.

CONCLUSION

As a conclusion, it can be confirmed that male sex and toxic habits are associated with the appearance of ECVA and with lifestyle as a determinant of human health according to the behavior assumed by patients in the health disease process. In this sense, the research opens the doors towards an integrative perspective based on the modification of inappropriate styles by other suitable ones in order to prevent toxic habits as risk factors that threaten individual health and generate pathologies that affect the cerebrovascular system.

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