Research Article

BIOMEDICAL Journal of Scientific & Technical Research

ISSN: 2574 -1241

DOI: 10.26717/BJSTR.2021.37.006040

Characterization of Cognitive Ability in Patients with Sequelae of Arterial Hypertension

Sandra Ochoa Durán*

Graduated in Psychology, Assistant Professor Institution: Julián Grimau García Polyclinic, Province: Santiago de Cuba, Cuba

***Corresponding author:** Sandra Ochoa Durán, Graduated in Psychology, Assistant Professor Institution: Julián Grimau García Polyclinic, Province: Santiago de Cuba, Cuba

ARTICLE INFO

Received: July 28, 2021

Published: August 02, 2021

Citation: Sandra Ochoa Durán. Characterization of Cognitive Ability in Patients with Sequelae of Arterial Hypertension. Biomed J Sci & Tech Res 37(4)-2021. BJSTR. MS.ID.006040.

ABSTRACT

A descriptive study was carried out with the objective of psychologically characterizing patients with sequelae of Arterial Hypertension, in the period from September 2018 to August 2019, in the Rehabilitation Room of the Julián Grimau polyclinic, in Santiago de Cuba. The qualitative-quantitative methodology was used, with the following methods: review of the Clinical History, neuropsychological report, psychological tests (Moca, Neuropsi, Mini-Mental State, Bender, and other affective ones). Also statistical techniques for data processing. Controlled variables were sex, age, occupation, diagnostic impression, and neuropsychological syndrome. The sample consisted of 12 patients out of 27 evaluated in the referred period. It was obtained as a result that Arterial Hypertension and its sequelae: cerebrovascular diseases, cerebral hemorrhages, cerebral infarcts; They cause neuropsychological syndromes, such as mnesic syndrome, aphasias, acalculia, agraphia, from the organic damage they cause in different areas of the brain, which constitute disabling entities in the daily life of the patient. In addition, these syndromes appear in both sexes, predominantly in the ages 50 to 59 years and 60 to 75 years, interfering with the possibility of continuing working life in most of these patients. Seven of the patients were inserted into the Cognitive Stimulation Program. The application of neuropsychological evaluation to the universe of hypertensive patients in the health area is proposed, in order to prevent the appearance of these syndromes, taking into account that Arterial Hypertension progressively affects the cardiovascular system of patients who suffer from it.

Introduction

Hypertension is the most common condition affecting the health of adult individuals in populations throughout the world. It is itself a disease, as well as an important risk factor for other diseases, including cerebrovascular disease. The prevention of high blood pressure is the most important, universal and least expensive health measure. Improving the prevention and control of blood pressure is a challenge for all countries and should be a priority for health institutions, the population, and governments. Cerebrovascular disease is the third leading cause of death in the Western world and in Cuba the leading cause of physical and intellectual disability. Hypertension is associated as the most frequent cause of this entity and represents a serious health problem in our environment. The fundamental task In this pairing, arterial hypertension and cerebrovascular disease will always be aimed at primary and secondary prevention [1]. A strong relationship has been described between the prevalence of hypertension and mortality from stroke. In Cuba, the mortality rate per 100,000 inhabitants due to cerebrovascular disease was 82.6 in 2015 (men: 82.6 and women: 82.7), these figures show a sustained upward trend in recent years. Stroke, whether ischemic or hemorrhagic, is the most serious and disabling complication of arterial hypertension on the central nervous system. The presence of other cardiovascular risk factors further increases the likelihood that it occurs. Antihypertensive treatment can significantly reduce the risk of stroke and hypertensive encephalopathy. In addition to stroke, other evolutionary silent lesions represent lesions in

the target organ of arterial hypertension such as leukoaraiosis, lacunar infarcts, cognitive impairment, subcortical arteriosclerotic encephalopathy or Binswanger's disease.

A significant number of hypertensive patients, even under treatment, suffer from acute stroke episodes or their recurrence, because arterial hypertension generates structural lesions in the arteries over time, which become complicated at some point in their evolution. Adequate treatment of arterial hypertension has reduced the risk of ischemic and hemorrhagic stroke by a significant percentage. The prevention of recurrent crime through antihypertensive treatment has shown benefit that extends to people with or without a history of arterial hypertension [2]. Neuropsychological evaluation and cognitive rehabilitation integrate the treatment of cognitive, affective, behavioral and psychosocial functions, from a holistic approach. For this reason, the neuropsychological evaluation in stroke patients has focused on retraining and compensation for altered functions [3]. In this way, the intervention methods have been refined according to the particularities of different clinical populations. Delving into the neuropsychological characteristics of neurological diseases and building holistic models of intervention according to these peculiarities, is currently considered the cornerstone of multiple rehabilitation programs that aim to improve the cognitive deficit in patients with CLD and dementia. Considering the role of conserved cognitive functions, cognitive reserve, metacognition, affective states, among other factors, from a comprehensive approach, can open the doors to new theoretical and methodological models focused more than on restoration, on the empowerment of cognitive skills and compensation strategies that allow a greater adaptation of the patient to their environment [4]. In 1986 the concept of rehabilitation took on greater significance and was defined as-the process of reestablishing patients to the highest possible level of functioning in the physical, psychological and socio-adaptive plane‖, using all possible means to reduce the impact of the disabling conditions and allowing people to reach an optimal level of social integration (World Health Organization [WHO], 1986).

Development

The Julián Grimau García Polyclinic has a Rehabilitation Room attended by patients with different pathologies, including Cerebrovascular Diseases, for their physical and psychological rehabilitation. Account in this service with a consultation of Psychological Evaluation and Cognitive Stimulation, in which diagnostic techniques and exercises are applied to stimulate and recover the cognitive functions damaged by the consequences that these brain diseases leave. In the care provided in this consultation, we noticed the high attendance of hypertensive patients suffering from Cerebrovascular Diseases that causes them, in most cases, loss or decrease of the capacity of the cognitive domains: memory, attention, language or muscle control. Based on this reality, we set out to psychologically characterize the cognitive capacity of patients with sequelae of Arterial Hypertension, in the period from September 2018 to August 2019; after the onset of a stroke.

Methodology

For this retrospective longitudinal descriptive work, the qualitative-quantitative methodology was used, with the following methods: review of the Clinical History, neuropsychological report, psychological tests (Moca, Neuropsi, Mini-Mental State, Bender, and other affective techniques, such as Idare, Zung and Conde and Psycho-affective Scale). Also the statistical technique of the percentage for the interpretation of the data. The controlled variables were: sex, age, occupation, diagnostic impression and neuropsychological syndrome. The sample consisted of 12 patients from a population of 46 patients evaluated in the Psychology consultation of the Rehabilitation Room of the Julián Grimau García Polyclinic, in the referred period. Of them 27 hypertensive. The inclusion criteria started from the possibility of neuropsychological evaluation of patients affected with Cerebrovascular Diseases and others caused by HTN.

Results

The results obtained indicate that of a sample of twelve patients evaluated, 7 were women (58.3%) and 5 men (41.6%). And that the predominant ages were between 50-59, with 4 cases (33.3%) and 60-75, with 6 (50%); that is, the last decade of adulthood and the third age. The following table shows this relationship (Table 1). Likewise, in the occupation variable, it is observed in the following table, of 12 patients, 5 were working (41.6%) and 6 were retired (50%) (Table 2). Moderate Cognitive Impairment predominated in the diagnostic impression with 7 patients (58.3%), 4 of them women and 3 men. It is illustrated in the table and in the graph (Table 3 & Figure 1). There is a greater presence of Moderate Cognitive Impairment in the patients evaluated in the age range of 60-75, with 6 subjects (50%), which leads to important limitations in the individuals who suffer from it in terms of their creative role in life (Table 4). Likewise, there is a high incidence of the presence of affective syndromes in patients, with a higher prevalence in women. In some cases, the three syndromes mentioned are present: anxiety syndrome, depressive syndrome and dependence. The depressive syndrome with the greatest presence, due to the disabling of these cerebrovascular diseases, which in some cases cause physical and psychological dependence to carry out daily activities. See the following illustrative charts and graph (Tables 5 & 6) (Figure 2). Regarding the diagnostic psychological techniques used, they appear in order of use: Bender: 9 patients, Moca: 8, Zung and Conde: 7, Katz and Lawton: 6, Mini-Mental State Examination: 3, Idare: 3, Psycho-affective Scale: 3y Neuropsi: 1 (Figure 3). Likewise, six of the evaluated patients had ischemic stroke, of which three were cerebral infarcts; two others: post-infarct epilepsy; two Diabetes Miellitus, one Parkinson's Disease and one Chronic Inflammatory Demyelinating Polyneuropathy. One of the patients also had Heart Failure (Figure 4).

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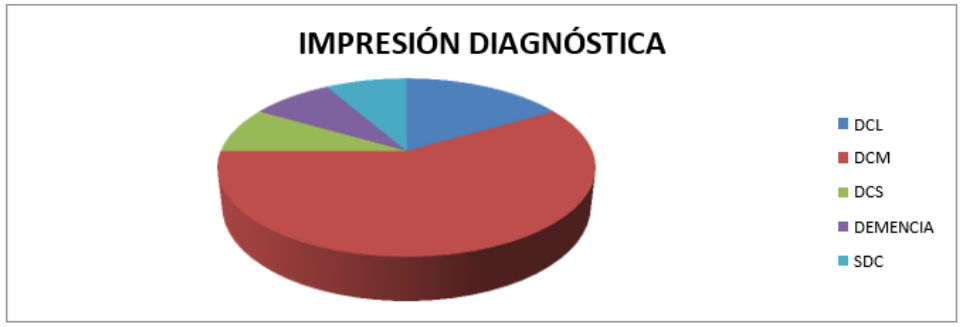

Figure 1.

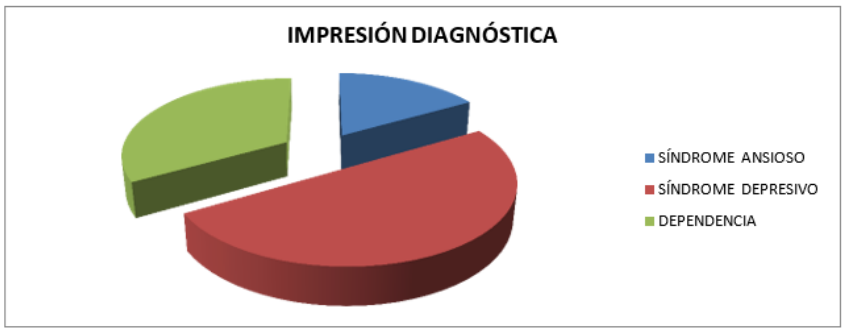

Figure 2.

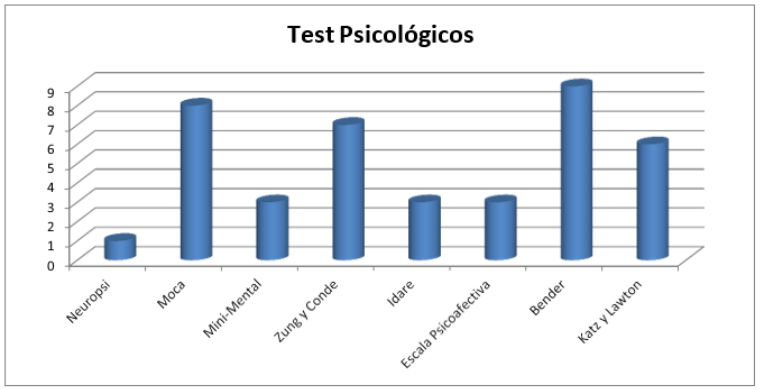

Figure 3.

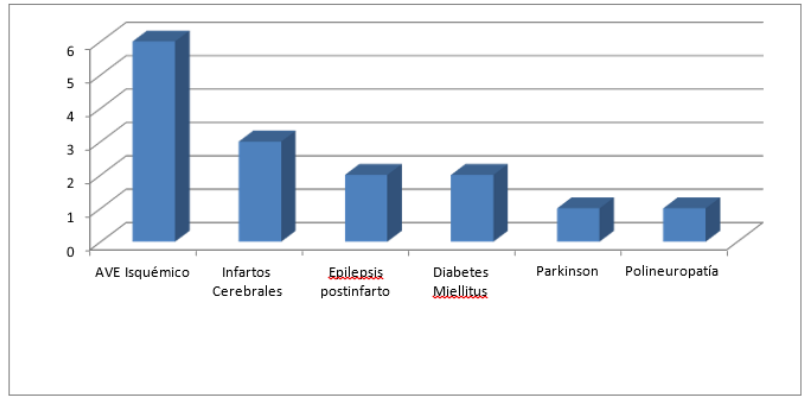

Figure 4.

Table 1.

EDAD	SEXO		
	FEMENINO	MASCULINO	TOTAL
40-49	1	-	1
50-59	1	3	4
60-75	4	2	6
76-89	1	-	1
TOTAL	7	5	12

Table 2.

OCUPACIÓN	SEXO		
	FEMENINO	MASCULINO	TOTAL
TRABAJADOR	2	3	5
JUBILADO	4	2	6
AMA DE CASA	1		1
TOTAL	7	5	12

Table 3.

IMPRESIÓN DIAGNÓSTICA	SEXO		
	FEMENINO	MASCULINO	TOTAL
DCL	1	1	2
DCM	4	3	7
DCS	1	-	1
DEMENCIA	1	-	1
SDC	-	1	1
TOTAL	7	5	12

Table 4.

IMPRESIÓN DIAGNÓSTICA	EDAD				
	40-49	50-59	60-75	76-89	TOTAL
DCL			2		2
DCM	1	2	4		7
DCS		1			1
DEMENCIA		-		1	1
SDC		1			1
TOTAL		4	6	1	12

Table 5.

IMPRESIÓN DIAGNÓSTICA	SEXO		
	FEMENINO	MASCULINO	TOTAL
SÍNDROME ANSIOSO	1	2	3
SÍNDROME DEPRESIVO	5	4	9
DEPENDENCIA	5	1	6

Table 6.

IMPRESIÓN DIAGNÓSTICA	EDAD				
	40-49	50-59	60-75	76-89	TOTAL
SÍNDROME ANSIOSO	1	2	-	-	3
SÍNDROME DEPRESIVO	1	2	5	1	9
DEPENDENCIA	-	2	3	1	6

Conclusion

Twelve patients of those psychologically evaluated in the Consultation were characterized in a period of one year. Of these, 7 women and 5 men, all with HTA APP and 6 of them with sequelae of cerebrovascular accidents. From the analysis carried out, it can be concluded that:

1. A significant number of hypertensive patients, even under treatment, suffer from acute stroke episodes or their recurrence, due to the fact that arterial hypertension generates structural lesions in the arteries over time, which become complicated at some point in their evolution.

2. These vascular diseases cause disabling cognitive sequelae for those who suffer from it, such as cognitive syndromes: aphasia, agrafia, acalculia, alexia and mnesic syndrome.

3. They also cause the appearance of Mild Cognitive Impairment, Moderate Cognitive Impairment and Severe Cognitive Impairment, as well as Vascular Dementias in patients who suffer from them.

4. There are also associated affective syndromes, such as depression and anxiety, because the creative activity of the patients is limited, in some cases they lose their employment relationship.

Recommendations

1. Apply the neuropsychological evaluation to the universe of hypertensive patients in the health area, in order to prevent the appearance of these syndromes, taking into account that Arterial Hypertension progressively affects the cardiovascular system of patients who suffer from it.

2. Implement an Educational Strategy to prevent the appearance of Cerebrovascular Diseases in hypertensive patients.

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ISSN: 2574-1241

DOI: 10.26717/BJSTR.2021.37.006040

Sandra Ochoa Durán. Biomed J Sci & Tech Res

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