Characterization of patients with stroke treated at Lucy Montoro Rehabilitation Center of São José dos Campos

Karina Costa Dias[1], Maria Angélica Nader Miranda Duarte[1], Nathália Borloni Silva[1], Maria Izabel Romão Lopes[1], Maria Angélica Ratier Jajah Nogueira[2]

....

ABSTRACT

Vascular Accident (CVA) is the neurological event that most affects society in recent years, causing disabilities in the population and death. It can be defined as a set of neurological disorders causing similar symptoms, but with different etiologies. Currently, Lucy Montoro Rehabilitation Center of São José dos Campos is a reference in the treatment of patients neurologically squealed. Thus, the aim of this study was to make an epidemiological survey of the profile of patients affected by CVA in this region and seen at this center. **Methods:** The records of patients received in this center between September 2011 and December 2014 were used during this research. Patients with hemiplegia caused by other etiologies were not analyzed. **Results:** Of the 230 valid records for the study, 60% were men and the socio-demographic profile showed that of these, 76% were older than 50 years. Considering the type of event, ischemic stroke was the most prevalent in our sample. It was found the same involvement of body parts affected, right and left 46% and 8% classified into double hemiparesis, since the prevailing motor pattern of the sample was paresis 87%. **Conclusion:** It was found that the population served by Lucy Montoro Rehabilitation Center of SJC consists most of men above 50 years of age affected by ischemic stroke (right or left) and prevalent paretic motor pattern.

Keywords: Rehabilitation Centers, Stroke, Epidemiology

[1] Physiotherapist, Centro de Reabilitação Lucy Montoro São José dos Campos.
[2] Physiatrist, Diretora Técnica do Centro de Reabilitação Lucy Montoro São José dos Campos.

Mailing address:
Centro de Reabilitação Lucy Montoro de São José dos Campos
Rua Saigiro Nakamura, 600
São José dos Campos – SP
CEP 12220-280
E-mail: pesquisa@lucymontoro.spdm.org.br

Acta Fisiatr. 2017;24(1):13-16

Dias KC, Duarte MAN, Silva NB, Lopes MIR, Nogueira MAR
Characterization of patients with stroke treated at Lucy Montoro Rehabilitation Center of
São José dos Campos

INTRODUCTION

Stroke is the neurological event that most affects society in recent years, causing disabilities and death in population.[1] It can be defined as a set of neurological disorders caused by vascular conditions with similar symptoms, but with different etiologies.[2]

It is characterized by the interruption of cerebral blood flow due to (ischemic) obstruction, or rupture of vessels with blood shed in brain tissue (hemorrhagic).[2] Interruption of nutrient and oxygen supply causes damage to the brain tissue and impairments thereto generated will depend on the region affected and the severity of the clinical condition.[2] The sequelae affecting the individual may include motor, sensory, perceptual, cognitive and language disorders.[3]

Due to the diversity of symptomatology, the deficits generated in the affected individuals greatly reduce their quality of life and functionality, leading, therefore, to a high level of distancing from social and labor life.[3]

Considering that stroke is a pathology with a high incidence in the elderly population and that the world population has a constant increase in life expectancy, and moreover, that society's lifestyle has become increasingly capitalist, and the population follows life habits that pose health risks and predispose to the stroke risk factors, one can understand why the number of affected individuals is so high, and consequently they are far removed from their social and labor activities.[3]

Currently, the Lucy Montoro Rehabilitation Center in São José dos Campos is a reference in the treatment of patients with neurological lesions in the Paraíba Valley.

OBJECTIVE

To characterize the profile of patients diagnosed with stroke at the Lucy Montoro Rehabilitation Center in São José dos Campos, verifying the prevalence of age, gender, etiology of stroke, prevalence of sequelae topography found in cerebral hemispheres, prevalence of hemibody and the motor skills of individuals.

METHODS

A retrospective study was carried out by means of a review of the medical records of patients seen at the Lucy Montoro Rehabilitation Center in São José dos Campos, from September 2011 to December 2014.

The sample selected was intentional non-probabilistic. The inclusion criteria were: to have a diagnosis of stroke and to undergo medical screening at this center. The medical records of the patients received at this center between September 2011 and December 2014 were analyzed. Patients with hemiplegia caused by other etiologies were excluded.

The study was descriptive and qualitative and quantitative, with a Cartesian methodological approach and an epidemiological and comparative procedure method. Data collection was done through the checklist of a previously developed worksheet, with a structured application with closed answers, covering socio-demographic issues (age, gender, type of stroke, prevalence of topography of the cerebral hemispheres, prevalence of hemibody affected the motor skills of the individuals).

After completing the spreadsheets, the data were tabulated and described. The statistical analysis was performed in a simple descriptive way, with the qualitative variables presented by means of relative frequencies (percentages), demonstrated in graphs.

RESULTS

Of the 272 charts reviewed, 42 were excluded because they were patients with hemiplegia due to causes other than stroke. Of the 230 remaining records, 60% were men (Figure 1) and the socio-demographic profile showed that of these, 76% were older than 50 years (Figure 2).

As for the type of event, ischemic stroke was the most prevalent in our sample, 60%, being also the most frequent type of event during analysis of isolated samples related to male and female genders (Figure 3).

As for the affected hemibody (Figure 4), it was found that both right and left hemibodies were equally affected, that is 46%; and 8% was classified as double hemiparesis.
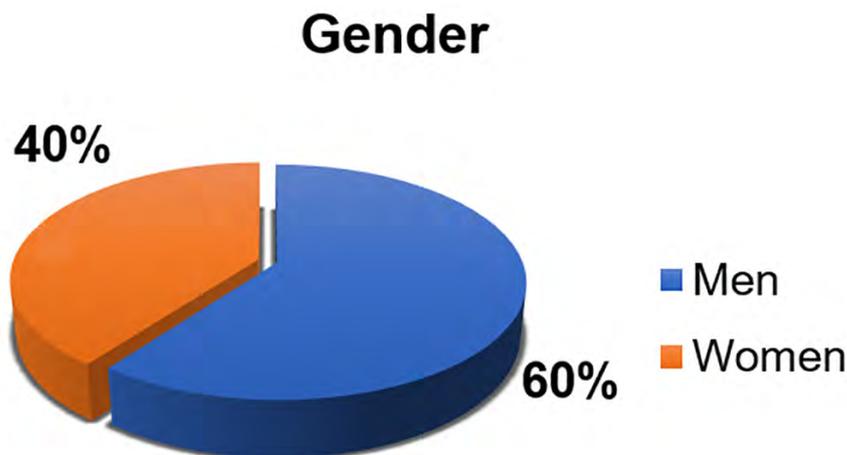

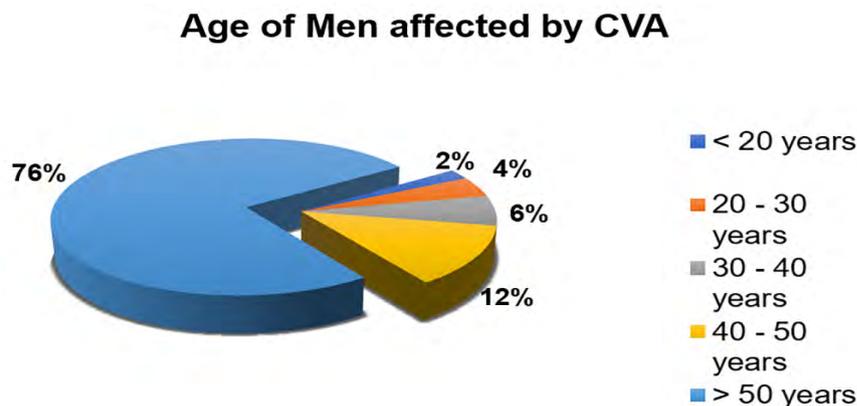**Figure 1.** Description of sample in relation to the genders of patients.

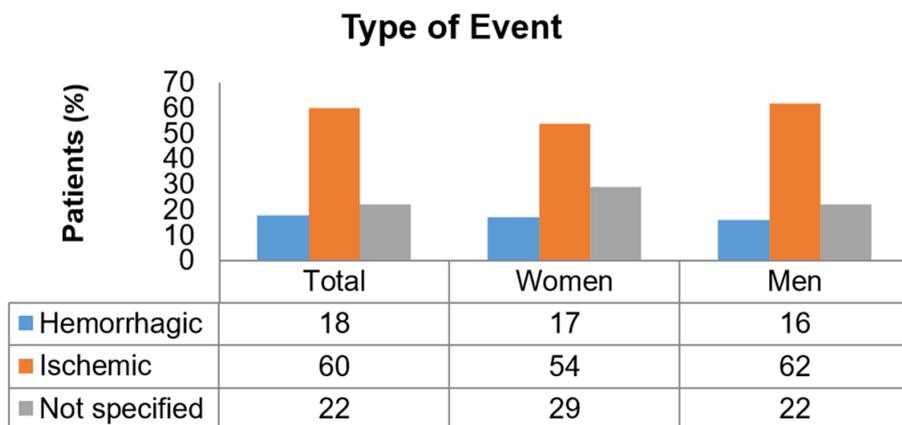**Figure 2.** Description of sample regarding gender and age of affected individuals.

Acta Fisiatr. 2017;24(1):13-16

Dias KC, Duarte MAN, Silva NB, Lopes MIR, Nogueira MAR
Characterization of patients with stroke treated at Lucy Montoro Rehabilitation Center of
São José dos Campos

Type of Event

	Total	Women	Men
■ Hemorrhagic	18	17	16
■ Ischemic	60	54	62
■ Not specified	22	29	22

Figure 3. Description of sample regarding the type of CVA.

Affected Hemibody

	Total	Women	Men
■ Right	46	42	44
■ Left	46	46	44
■ Double hemi	8	12	12
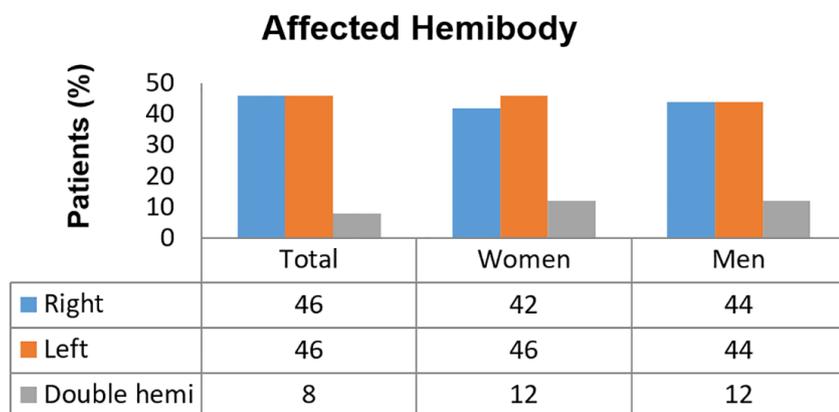
Figure 4. Description of sample regarding the affected hemibody.

Motor Pattern

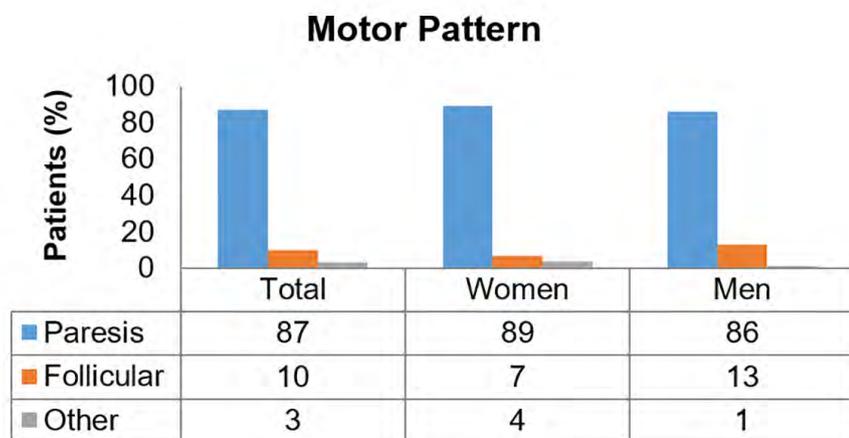|	Total	Women	Men
■ Paresis	87	89	86
■ Follicular	10	7	13
■ Other	3	4	1

Figure 5. Description of sample regarding the observed motor pattern.

The left hemibody was slightly more affected among females (Figure 4), however, among males there was no prevalence, observing 44% of involvement rate of each hemibody and the other 12% of double hemiparesis.

The predominant motor pattern of the sample was 87% paresis (Figure 5), followed by the follicular rate, 10%, and other motor classifications 3%. The analysis of the sample showed that male and female individuals experienced a prevalence of motor pattern in paresis, 89% and 86%, respectively (Figure 5).

DISCUSSION

The CVA is considered the second largest cause of death in the world and the main cause of disability in adults.[4] Literature shows that the incidence is higher in males and elderly people.[2,5] Among the risk factors for stroke, the main ones are: arterial hypertension, diabetes mellitus and cardiopathies.[2,4,5]

The sample of this study had a greater number of males over 50 years of age, in agreement with reports found in literature, which correlate cardiovascular alterations to the aging process and the occurrence of stroke.[6,7,8,9]

Recent data from the United States also show a prevalence of stroke in men, but this relationship is reversed with advancing age, when women above 85 years of age present a higher risk of stroke.[10]

A systematic review of 2009, which compared the differences in stroke epidemiology between men and women, observed a mean age of stroke in 68-year-old men and 72-year-old women, in agreement with this study, which showed a higher incidence among men of age over 50 years.[10,11]

When the types of events were evaluated, ischemic stroke was more frequent (60%) among the patients treated at the SJC Lucy Montoro Rehabilitation Center, according to data from the American Heart Association, which reports that 87% of all cases are of ischemic type and 10% are of hemorrhagic cause.[10]

The study by Appelros[11] demonstrated that ischemic stroke is more frequent in women, and this population is more severely affected, with higher rates of fatalities. However, in the sample of this study, no positive correlation was found with this data, since the men attended in the SJC's Lucy Montoro Rehabilitation Center are more affected than women.

Acta Fisiatr. 2017;24(1):13-16

Dias KC, Duarte MAN, Silva NB, Lopes MIR, Nogueira MAR
Characterization of patients with stroke treated at Lucy Montoro Rehabilitation Center of
São José dos Campos

In addition, we observed that the predominance of male individuals might be related to personal antecedents, since they show exposure to a greater number of risk factors for stroke, probably due to lifestyle. This finding agrees with the literature says, which is, men have higher systemic blood pressure than women of the same age, and in addition, smoking is more frequent in men.[12,13,14]

The motor pattern of paresis was the most frequent, 87%, but it is possible that this number is even greater, since many health professionals generalize the use of the term "hemiplegia", in agreement with the International Classification of Diseases (ICD 10) at the time of classifying the patients affected by stroke.[12]

The affected hemibody in the patient depends on which cerebral hemisphere was injured with the CVA, and studies were found that verified the predominance of both cases, a higher rate of right and left hemibody involvement.[15] In this study, there was a fairness in the involvement of the sample when analyzed globally, but during the gender-related analysis, women had a predominance of sequels of the left hemibody (46%).

CONCLUSION

It was verified that the population served by the SJC Lucy Montoro Rehabilitation Center consists of a majority of men over 50 years of age, affected by ischemic stroke (right or left) and with a prevalent paretic motor pattern.

These are important data in order to propose local public health policies aimed at improving living habits and possible prevention of stroke, as well as providing the SJC Lucy Montoro Rehabilitation Center with a realistic view of the portion of the population that receives their care, seeking thus to improve their functionality and consequently influencing their reinsertion in the labor market.

REFERENCES

1. André C. Manual do AVC. 2 ed. Rio de Janeiro: Revinter; 2006.
2. O'Sullivan SB, Schmitz TJ, Fulk G. Physical rehabilitation. Philadelphia: F.A. Davis; 2013.
3. Silva SA. Depressão e incapacidade funcional em idosos: um estudo de base populacional [Tese]. São Paulo: Universidade de São Paulo, Faculdade de Medicina; 2013.
4. World Health Organization. Stroke, cerebrovascular accident [text on the Internet]. Geneva: WHO [cited 2013 mar 26]. Available from: http://www.who.int/topics/cerebrovascular_accident/en/
5. Rodrigues JE, Sá MS, Alouche SR. Perfil dos pacientes acometidos por AVE tratados na clínica escola de fisioterapia da UMESP. Rev Neurocien. 2004;12(3):117-22.
6. O'Donnell MJ, Xavier D, Liu L, Zhang H, Chin SL, Rao-Melacini P, et al. Risk factors for ischaemic and intracerebral haemorrhagic stroke in 22 countries (the INTERSTROKE study): a case-control study. Lancet. 2010;376(9735):112-23. DOI: http://dx.doi.org/10.1016/S0140-6736(10)60834-3
7. Pieri A, Spitz M, Lopes TO, Barros CG, Faulhaber MW, Gabbai AA, et al. Prevalence of cardiovascular risk factors among elderly Brazilians over eighty with ischemic stroke. Arq Neuropsiquiatr. 2008;66(3A):454-7. DOI: http://dx.doi.org/10.1590/S0004-282X2008000400002
8. Radanovic M. Characteristics of care to patients with stroke in a secondary hospital. Arq Neuropsiquiatr. 2000;58(1):99-106.
9. Peixoto SV, Giatti L, Afradique ME, Lima-Costa MF. Custo das internações hospitalares entre idosos brasileiros no âmbito do Sistema Único de Saúde. Epidemiol Serv Saúde. 2004;13(4):239-46.
10. Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Blaha MJ, et al. Heart disease and stroke statistics--2014 update: a report from the American Heart Association. Circulation. 2014;129(3):e28-e292. DOI: http://dx.doi.org/10.1161/01.cir.0000441139.02102.80
11. Appelros P, Stegmayr B, Terént A. Sex differences in stroke epidemiology: a systematic review. Stroke. 2009;40(4):1082-90. DOI: http://dx.doi.org/10.1161/STROKEAHA.108.540781
12. Classificação Estatística Internacional de Doenças e Problemas Relacionados à Saúde – CID 10 [texto na Internet]. São Paulo: Centro Brasileiro de Classificação de Doenças [citado 2013 mar 26]. Disponível em: http://www.datasus.gov.br/cid10/V2008/cid10.htm
13. Khoury S, Yarows SA, O'Brien TK, Sowers JR. Ambulatory blood pressure monitoring in a nonacademic setting. Effects of age and sex. Am J Hypertens. 1992;5(9):616-23. DOI: http://dx.doi.org/10.1093/ajh/5.9.616
14. Fang MC, Singer DE, Chang Y, Hylek EM, Henault LE, Jensvold NG, et al. Gender differences in the risk of ischemic stroke and peripheral embolism in atrial fibrillation: the AnTicoagulation and Risk factors In Atrial fibrillation (ATRIA) study. Circulation. 2005;112(12):1687-91. DOI: http://dx.doi.org/10.1161/CIRCULATIONAHA.105.553438
15. Lopes PG. Avaliação da marcha e do equilíbrio em pacientes hemiparéticos: comparação entre acidente vascular encefálico em hemisfério dominante e não dominante [Dissertação]. São Paulo: Universidade de São Paulo, Faculdade de Medicina; 2012.