

CLINICAL PROFILE OF PATIENTS DIAGNOSED WITH STROKE: A BIBLIOGRAPHICAL REVIEW

Caroline Costa

Universidade Estadual de Mato Grosso do Sul, medicine course
Campo Grande - MS
<http://lattes.cnpq.br/3845733439146235>

Gabriel Ribeiro Belfort

Universidade Estadual de Mato Grosso do Sul, medicine course
Campo Grande - MS
<https://lattes.cnpq.br/5205536852630600>

Victor Hugo de Araújo Gonçalves

Universidade Estadual de Mato Grosso do Sul, medicine course
Campo Grande - MS
<http://lattes.cnpq.br/4388965354899027>

Leany Fonseca Razuk

Doctor at: Secretaria Municipal de Saúde de Campo Grande
Campo Grande - MS
<http://lattes.cnpq.br/8153620666514733>

Felipe Garcia Pereira

Doctor at: Secretaria Municipal de Saúde de Campo Grande
Campo Grande - MS
<http://lattes.cnpq.br/8481086254834063>

Jéssica Salomão Borges

Doctor at: Secretaria Municipal de Saúde de Campo Grande
Campo Grande - MS
<http://lattes.cnpq.br/3280891580137577>

All content in this magazine is licensed under a Creative Commons Attribution License. Attribution-Non-Commercial-Non-Derivatives 4.0 International (CC BY-NC-ND 4.0).



Bárbara Mayumi Ferri

Médica da Secretaria Municipal de Saúde de
Campo Grande
Campo Grande - MS
<http://lattes.cnpq.br/4999180698461468>

Marleide dos Santos

Universidade Nove de Julho, medicine
course, Campus Osasco
Osasco - SP
<http://lattes.cnpq.br/6611589699394925>

Jair da Costa Matos

Universidade Nove de Julho, medicine
course, Campus Vergueiro
São Paulo - SP
<http://lattes.cnpq.br/2601257202760448>

Mariana Kistemann Gonçalves Dias

Faculdade de Ciências Médicas da Santa Casa
de São Paulo
São Paulo - SP
<http://lattes.cnpq.br/0276821093465788>

Katia Juliane Lopes de Oliveira

Universidade Estadual de Mato Grosso do
Sul
Campo Grande – MS
<http://lattes.cnpq.br/8071475926595741>

Abstract: Stroke is one of the main causes of death in developed countries and, in Brazil, cerebrovascular diseases, including stroke, cause a high number of deaths. In this scenario, this work aims to describe the results of a scientific initiation project, which aimed to characterize the clinical profile of patients diagnosed with cerebrovascular accident (CVA). The methodology included a qualitative narrative review, covering a decade of research (2012 to 2022) in medical databases such as MEDLINE and PUBMED, using specific descriptors. 339 works were identified, of which 10 were selected after a refinement process. Risk factors for stroke were categorized into non-modifiable (age, sex, race, geographic location, heredity and family history) and modifiable (high blood pressure, diabetes, sedentary lifestyle, obesity, dyslipidemia, heart disease, atrial fibrillation, valve calcification aortic stenosis and carotid arteries, use of combined oral contraceptives, smoking and alcoholism). Arterial hypertension was highlighted as the most prevalent risk factor. This study emphasizes the crucial importance of knowing the risk factors associated with stroke when formulating primary and secondary prevention strategies. This can significantly contribute to reducing the incidence of this serious vascular event, encouraging better self-care in the population. Furthermore, the need for educational campaigns and awareness programs to increase public understanding of the risks related to stroke and promote a healthier lifestyle is highlighted.

Keywords: Stroke; Risk factors; Health Profile; Literature review.

INTRODUCTION

A cerebrovascular accident (CVA) is a focal or global neurological condition that occurs suddenly, of vascular origin and that leads to death or lasts for more than 24 hours (CANUTO; NOGUEIRA; ARAÚJO, 2015). According to the World Health Organization (WHO, 2017), it is caused by interruption of the blood supply to the brain, usually due to the rupture of a blood vessel or its obstruction by a clot, cutting off the supply of oxygen and nutrients, causing tissue damage. cerebral.

Stroke comes in two forms: (1) anoxic-ischemic (iVA), resulting from insufficient cerebral blood supply, responsible for two thirds of cases, presenting lacunar, atherosclerotic and embolic subtypes; and (2) hemorrhagic (hSVA), responsible for the largest number of deaths in a study carried out by Radanovic (2000), generally related to the rupture of arteries in the circle of Willis, subdivided into intraparenchymal and subarachnoid (RADANOVIC, 2000; CHAVES, 2000).

Regarding the signs and symptoms of stroke, according to the WHO (2017), the most common are sudden weakness or numbness of the face, arm or leg, most often in just one hemisphere of the body, with confusion, dizziness, loss of balance or coordination, language difficulties, fainting and, depending on the severity of the condition, lead to death (BRASIL, 2013a).

Stroke is the third leading cause of death in developed countries (GRUMANN et al., 2017), and in Brazil, cerebrovascular diseases, which include stroke, were responsible for 99,732 deaths (CANUTO; NOGUEIRA; ARAÚJO, 2015). Furthermore, it is known that stroke presents a partially defined profile of the affected population, with some characteristics being more significant in terms of prevalence than others, making it possible to detect patients with a possible increased

risk for the disease.

With regard to risk factors, stroke is strongly linked to the patient's intrinsic factors, such as advanced age, race, sex, dyslipidemia, diabetes mellitus (DM), thromboembolic diseases, systemic arterial hypertension (SAH), and extrinsic factors, such as smoking, alcohol consumption, poor diet, as well as low socioeconomic status, all of which are present in the etiology of the disease (GRUMANN et al., 2017). The increase in population aging, combined with other risk factors, becomes increasingly important in predicting stroke cases. Thus, risk factors for stroke can be classified as modifiable (SAH, physical inactivity, alcoholism, obesity, smoking and diabetes) and non-modifiable (age, sex, race, family history, heart disease, hypercholesterolemia) (LEITE; NUNES ; CORRÊA, 2009).

Therefore, it can be said that stroke is a serious condition that affects a considerable portion of the population both in Brazil and around the world, and may or may not be associated with other morbidities such as diabetes and high blood pressure. This fact makes it a health problem of great importance, as its incidence in the population leads to a large increase in health spending, especially with regard to the rehabilitation of affected patients, as well as serious damage to a significant portion. of the population. For this reason, it is of great importance to understand the risk factors that predispose to stroke to facilitate its prevention and reduce its incidence in the population.

Therefore, given the scope of the disease, this study is of great importance in characterizing the affected population in order to assist in the creation of measures to prevent and combat stroke, significantly reducing its presence in the community.

OBJECTIVES

This study had the general objective of characterizing the clinical profile of patients diagnosed with cerebrovascular accident (CVA). To achieve this objective, specific objectives were defined, such as: comparing the profile of the different studies found in the literature; identify modifiable and non-modifiable factors that can be intervened; determine the most prevalent and most important risk factor in the literature.

METHODOLOGY

This work consisted of a narrative review about the clinical profile of patients affected by cerebrovascular accident (CVA), using a qualitative approach.

Information collection was carried out through a search in the MEDLINE and PUBMED databases covering the last 10 years (2012 to 2022). The combined descriptors were as follows: 'Cerebral Vascular Accident', 'CVA', 'AVC', 'stroke', 'Risk Factors', 'Risk Factors', 'Anticoagulants', 'Anticoagulants', 'Health Profile', 'Health Profile', using the Boolean operator "and". Data collection was carried out from September 18, 2022 to May 10, 2023.

The established inclusion criteria were: (1) scientific articles in English or Portuguese; (2) articles that evaluated the relationship between comorbidities, medication and other risk factors with stroke; (3) original articles. The exclusion criteria were: (1) prior to 2011; (2) that deal with pathology unrelated to stroke; (3) articles that do not correspond to the proposed objective.

Thus, 339 studies were identified, and after refinement, 10 studies were selected.

RESULTS

When searching in PubMed, 173 documents were obtained. The MEDLINE search resulted in 166 documents, totaling 339 works. After applying the inclusion and exclusion criteria, 21 works remained, of which only 10 addressed the central theme of the research, this being the final sample of articles from this project.

To better illustrate the work selection process, follow the flowchart below (figure 1), based on the Prisma Protocol.

Regarding the studies selected to carry out this work, it was possible to group the comorbidities, lifestyle habits and sociodemographic data that characterize the clinical profile of patients diagnosed with stroke.

Regarding risk factors, they can be divided into modifiable and non-modifiable. The non-modifiable factors found in the articles were: age, sex, race, geographic location, heredity and family history. The modifiable ones were: high blood pressure, diabetes mellitus, physical inactivity, obesity, dyslipidemia, heart disease, atrial fibrillation, aortic valve calcification, aortic and carotid artery stenosis, use of combined oral contraceptives, smoking and alcoholism. This can be better illustrated in the following table (table 1):

Among the 10 articles selected, all of them considered high blood pressure, smoking and diabetes mellitus as risk factors for developing stroke. However, only 8 considered dyslipidemia as a factor and only 7 considered obesity and atrial fibrillation. Furthermore, only 5 cited cardiovascular disease as an important risk factor, 3 articles cited alcoholism, 2 cited the use of combined oral contraceptives and 2 of them cited aortic valve calcification.

Among the articles chosen, only 3 explored the topic of the pharmacological profile and treatment of comorbidities of patients

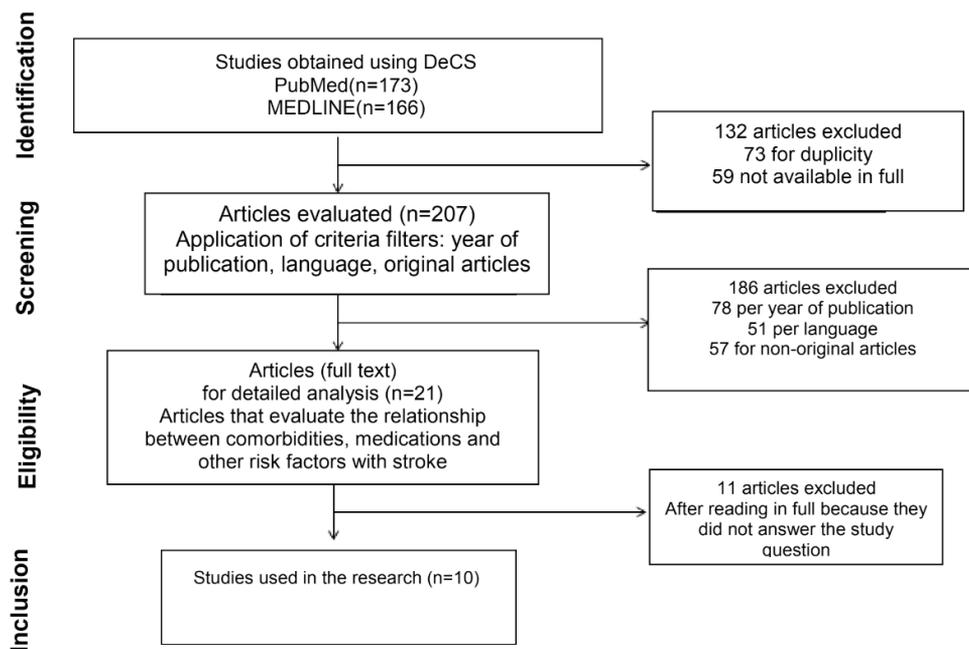


Figure1:PRISMA protocol –choice of articles for review

Source: prepared by the authors

NOT MODIFIABLE	MODIFIABLE
Age	Arterial hypertension
Gender	Diabetes Mellitus
Race	Smoking
Geographic location	Dyslipidemia
Heredity/Family history	Obesity and sedentary lifestyle
	Atrial fibrillation
	Cardiovascular disease
	Alcoholism
	Use of combined oral contraceptives
	Aortic valve calcification or carotid artery stenosis

Figure1:PRISMA protocol –choice of articles for review

Source: prepared by the authors

STUDIES	AUTHORS AND YEAR OF PUBLISHING	TITLE
Study 1	Mateus de Sousa Rodrigues, Leonardo Fernandes and Santana, Ivan Martins Galvão. 2017	Modifiable and non-modifiable risk factors for ischemic stroke: a descriptive approach
Study 2	Michelle Morton Figueiredo Neves ¹ , Laiz Helena de Castro Toledo Guimarães. 2015	Quality of Life and Degree of Functional Independence in Patients with Stroke
Study 3	Sâmea Rafaela Rodrigues Damata Laura Maria Feitosa Formiga, Ana Klisse Silva Araújo, Edina Araújo Rodrigues Oliveira, Ana Karla Sousa de Oliveira, Ronaldo César Feitosa Formiga. 2016	Epidemiological profile of elderly people affected by stroke
Study 4	Michelle Hillig Schmidt, Clarissa Maciel Selau, Priscila da Silva Soares, Emanuele Farencena Franchi, Viviane Dutra Piber, Louise Bertoldo Quatrin. 2019	Stroke and different limitations: an interdisciplinary analysis

Study 5	Danfeng Zhang, Xianliang Dai, Chaoqun Wang, Kaiwei Han, Junyu Wang, Yan Dong, Jigang Chen, Lijun Hou. 2018	Aortic valve calcification and stroke risk: a systematic review and meta-analysis
Study 6	Andréa Regina Schuch Grumann; Soraia Dornelles Schoeller ; Alessandra Cadete Martini; Stefânia Forner; Giovanni Carlos Baroni; Bianca Dana Horongozo. 2017	Characteristics of people with stroke treated at a state reference center
Study 7	Gabriela Nunes Roxa, Ana Rachel Vieira Amorim, Geovanna Renaisa Ferreira Caldas, Aldênia dos Santos Holanda Ferreira, Felipe Eufrosino de Alencar Rodrigues, Maisa Olinda Silva Santos Gonçalves, Thiago Bruno Santana, Cicero Rafael Lopes da Silva. 2021	Epidemiological profile of patients with ischemic stroke undergoing thrombolytic therapy: an integrative review
Study 8	Ming-Ju Hsieh, Sung-Chun Tang, Patrick Chow-In Ko, Wen-Chu Chiang, Li-Kai Tsai, Anna Marie Chang, An-Yi Wang, Shin-Joe Yeh, Kuang-Yu Huang, Jiann-Shing Jeng, Matthew Huei-Ming Ma. 2016	Improved performance of new pre-notification criteria for acute stroke patients
Study 9	Gisele Sampaio Silva, Renato Delascio Lopes. 2018	Management of antithrombotic therapy in patients with stroke: where are we in 2018?
Study 10	Eduardo Rovaris Sartoretto, Gabriel Santos da Silva, Alaor Ernst Schein, Kristian Madeira. 2019	Contraindications to the use of thrombolytics in patients suffering from ischemic stroke in a high-complexity hospital in the south of Santa Catarina between 2012 and 2014

Table 2: listed studies, their authors, year of publication and titles

Source: prepared by the authors

affected by stroke. From these studies, the most commonly used medications identified were: antihypertensives, antiplatelets, statins, oral hypoglycemic agents, insulin, oral anticoagulants and direct thrombin inhibitors.

The 10 studies are listed below (table 2), highlighting, in addition to the titles, the authors and the year in which they were published.

DISCUSSION

Stroke has a high morbidity and mortality rate in Brazil and around the world, especially taking into account the increase in the prevalence of chronic diseases over the years. A stroke is a clinical sign of rapidly developing focal disturbance of brain function of presumed vascular origin that lasts more than 24 hours. The neurological deficit caused by stroke can be transient or permanent and is due to vascular lesions in an area of the brain (GRUMANN, 2017). Regarding stroke subtypes, it can be stated that ischemic stroke

is responsible for 80% of cases, a prevalence that is significantly higher in relation to hemorrhagic stroke (SARTORETTO, 2019).

Regarding risk factors, it was concluded that the most prevalent risk factor for developing stroke among the selected articles was high blood pressure, mentioned in all studies. This data coincides with the epidemiology of the world health organization (WHO), which shows that 62% of stroke cases are due to high blood pressure levels (RODRIGUES, 2017).

MODIFIABLE RISK FACTORS

The second most prevalent risk factor among 7 of the articles covered was diabetes mellitus, associated with dyslipidemia, obesity and a sedentary lifestyle. Some of these studies consider these factors together, configuring a metabolic syndrome that increases the risk of stroke. However, 2 other articles classify heart disease as the second most prevalent cause, in which atrial fibrillation stands out as the main arrhythmia capable of causing stroke,

especially of thromboembolic etiology. Two other studies list aortic valve calcification and aortic stenosis as important associated cardiac factors. Smoking is also an important risk factor, being listed as the second most prevalent in one of the studies, being present in 62.5% of stroke cases (ROXA, et al, 2021). Alcoholism and the use of combined oral contraceptives are rarely mentioned in the articles, acting in a supporting way in the etiology of cerebrovascular disease.

NON-MODIFIABLE RISK FACTORS

Regarding sex, it can be said that there was divergence between the works. According to Grumann (2017), stroke affects 25.11% of women between 71-80 years old and 34.09% of men between 61-70 years old, however, according to Schmidt's study carried out in 2019, the sex ratio is approximately the same.

Regarding the age factor, there were divergences among the selected sample. According to Roxa's work carried out in 2021, stroke affects people over 65 years of age, and the incidence increases rapidly with increasing age; After age 55, the risk doubles every 10 years. However, according to Schmidt, there is a prevalence of 39.8% of cases in the young adult age group (30 to 59 years old). Another reference shows that men are more likely to be affected by strokes, especially at younger ages, and women tend to suffer strokes at older ages, with a higher prevalence between 71 and 80

years old (NEVES and GUIMARÃES, 2015).

FINAL CONSIDERATIONS

In conclusion, this study highlights the crucial importance of knowing the risk factors associated with stroke in developing effective primary and secondary prevention strategies, contributing to better self-care and reducing the incidence of this vascular event. The finding that the majority of individuals who survive a stroke face substantial sequelae, whether in motor, sensory, communicative or functional terms, highlights the relevance of rehabilitation in the full reintegration of these patients into society, allowing them to recover essential skills and achieve a better life. with quality.

The results presented here reinforce the main risk factors associated with acute stroke, highlighting the effectiveness of simple measures, such as controlling these factors, in reducing disability and mortality. Furthermore, this study highlights the need to address systemic arterial hypertension, the main underlying cause of stroke, highlighting the importance of acting preventively against the main contemporary diseases. In this sense, the research emphasizes the relevance of interventions focused on the prevention and management of these risk factors, aiming to improve vascular health and, consequently, the quality of life of the general population.

REFERENCES

- CANUTO, M.A.O.; NOGUEIRA, L.T.; ARAUJO, T.M.E. **Qualidade de vida relacionada à saúde de pessoas após acidente vascular cerebral**. Acta Paulista enfermagem, v.29, n.3, 2016, p.245-252.
- DAMATA, S.R.R. et al. **Perfil epidemiológico dos idosos acometidos por acidente vascular cerebral**. R. Interd. v. 9, n. 1, p. 107-117, jan. fev. mar. 2016.
- GRUMANN, A.R.S. et al. **Características das pessoas com Acidente Vascular Encefálico atendidas em um centro de referência estadual**. Revista de Pesquisa: Cuidado é Fundamental Online, v. 9, n. 2, 2017, p.315-320.
- HSIEH, M.J. et al. **Improved performance of new prenotification criteria for acute stroke patients**. Journal of the Formosan Medical Association (2016) 115, 257-262.
- NEVES, M.M.F. et al. **Qualidade de Vida e Grau de Independência Funcional em Pacientes com Acidente Vascular Cerebral**. Rev Neurocienc 2016;24:1-17.
- RADANOVIC, M. **Características do atendimento de pacientes com acidente vascular cerebral em hospital secundário**. Arquivos de Neuro-Psiquiatria; v.58, n.1, 2000, p.99-106.
- RODRIGUES, M.S. et al. **Fatores de risco modificáveis e não modificáveis do AVC isquêmico: uma abordagem descritiva**. Rev Med (São Paulo). 2017 jul.-set.;96(3):187-92.
- ROXA, G.N. et al. **Perfil epidemiológico dos pacientes acometidos com AVC isquêmico submetidos a terapia trombolítica: uma revisão integrativa**. Brazilian Journal of Development, Curitiba, v.7, n.1, p. 7341-7351 Jan. 2021
- SARTORETTO, E. R. et al. **Contraindicações ao uso de trombolítico em pacientes acometidos por acidente vascular cerebral isquêmico num hospital de alta complexidade do sul catarinense no período de 2012 a 2014**. Arq. Catarin Med. 2019 jan-mar; 48(1):108-117
- SCHMDIT, M.H. et al. **Acidente vascular cerebral e diferentes limitações: uma análise interdisciplinar**. Arq. Cienc. Saúde UNIPAR, Umuarama, v. 23, n. 2, p. 139-144, maio/ago. 2019.
- SILVA, G.S. et al. **Manejo da terapia antitrombótica em pacientes com acidente vascular cerebral: onde estamos em 2018?** Rev Soc Cardiol Estado de São Paulo 2018;28(3):267-75.
- WORLD HEALTH ORGANIZATION. **Stroke, cerebrovascular accident**. Ago. 2017.
- ZHANG D et al. **Aortic valve calcification and risk of stroke: A systematic review and meta-analysis**. J Clin Neurosci (2018).