

Research Article

Ischemic Stroke; A Severe Complication In Patients Admitted To Resuscitation

Zelmat SA^{1*}, Bouabida D², Bellalaoui I³, Zaoui C⁴, Boucherite E³, Mazour F⁵

¹Lecturer A in intensive care anesthesia, EHU d'Oran, Oran, Algeria

²Department of Pediatrics, EHU d'Oran, Oran, Algeria

²Department of Obstetrics and Gynecology, EHU d'Oran, Oran, Algeria

⁴Faculty of Medicine, EHU d'Oran, Oran, Algeria

⁵Resuscitation anesthesia specialty, EHU d'Oran, Oran, Algeria

***Corresponding Author:** Zelmat Setti Aouicha, Lecturer A in intensive care anesthesia, EHU d'Oran, Resuscitation anesthesia specialty, Oran, Algeria, E-mail: settiaouichazelmat@yahoo.fr

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Abstract

Stroke is a real public health problem because of its incidence and morbimortality. Ischemic stroke (AVCI) accounts for 80% of strokes. It is the third leading cause of overall mortality in industrialized countries, after heart disease and cancer, and the leading cause of physical disability acquired. The objective of our study was to describe the clinical characteristics, and factors of Cardiovascular Risk (LRIF) and the factors associated with death in patients admitted for stroke (AVCI) and them in a resuscitation ward.

Methods: Retrospective study over a 12-month period (between January 1, 2018 and January 1, 2019),

conducted in the medical-surgical emergency room.

Results: A total of 147 strokes: 110 AVCI (84%). The age of the patients included in the study ranged from 49 to 77 years. The average age was 66 years - 10.9 years, 75% of AVCI occurring after 65 years. Sex divided into 47 women (42.72%). And 63 men (57.28%). Ischemic strokes: The main vascular risk factors three risk factors: severe high blood pressure (0.007), diabetes (0.05) and emboligenic heart disease (0.017). Other risk factors found are tobacco (13.09%), obesity (10.7%), dyslipidemia (08.3%), alcohol (7.1%). 17, 8% of patients had a history of formed stroke or TIA (Table 1). The onset of neurological symptomatology was brutal in

70% (77 patients). The clinical examination at admission found consciousness disorders with a NIHSS score of 5 to 15 in 45.54% of cases (49 patients). 23 patients (20.9%) had a NIHSS score of 15 and 39 patients (35.45%). Para clinical cardiac evaluation (ECG, Echocoeur) objective a complete arrhythmia by atrial fibrillation (AC/FA) in 11.4% of cases, left atrial hypertrophy in 40% of cases and left ventricular hypertrophy in 89% of cases. The length of hospitalization in resuscitation ranged from 1 to 46 days with an average of 13.4 days (-10.1). Among the 110 patients 22 died or (20%). Three risk factors associated with the poor prognosis: NIHSS SUP(p - 0.0001), anisocoria(p - 0.006) and long stay in reanimation(p - 0.013).

Conclusion: Ischemic strokes have a major public health impact in terms of mortality or morbidity because of the physical and psychological consequences they can cause. The management of cardiovascular risk factors, the first of which is the HTA, keeps its interest with the peculiarity of diabetic balance and the cessation of tobacco in combination with a diet. Cardiovascular assessment (ACFA, HAG, HVG) plays an important role in stroke management. Primary and secondary stroke prevention requires the prevention of thromboembolic accidents (ACFA) Stroke remains a challenge.

Keywords: Ischemic stroke

1. Introduction

1.1 Definition

Stroke is a sudden onset focal neurological deficit (onset in less than 2 minutes) in relation to a brain parenchyma lesion by heart attack or hemorrhage secondary to a cerebral vascular pathology of arterial or venous origin the first cause of acquired motor impairment in the adult. The third leading cause of death after

cardiovascular disease and cancer. On distinguish 2 type of stroke 1 stroke [1, 2, 3, 4]. ischemic (85% of cases) composed of

- Transient ischemic infarction and
- ischemic infarction consisting of

And hemorrhagic stroke (15% of cases)

- Bleeding in the brain
- Cerebral thrombophlebitis

1.2 Gravity scores

1.2.1 NIHSS Score:

Minor stroke: NIHSS 1-4

Major stroke: NIHSS 5-15

Severe stroke: NIHSS top 15

Allows:

- Quantify neurological deficit.
- Assess the initial severity of patients.

If the NIHSS score is 15: there is a high probability of having a poor prognosis in 3 months.

1.2.2 Glasgow score: A severe stroke is a stroke whose SCORE of NIHSS -15 AND GLASCOW-It; 9.

1.2.3 Risk Factors: [5] The risk factors for IVUS differ from those of hemorrhagic strokes, although some of them are common both. It is classic to separate risk factors into modifiable and non-modifiable factors.

1.3 Non-modifiable risk factors

Non-modifiable risk factors are generally common between AVCI and hemorrhagic.

1.3.1 Age: It is the most powerful: after age 55, the risk of stroke doubles every.

1.3.2 Sex: [6] Male does not appear to be a major factor in the occurrence of a stroke unlike coronary heart disease, but the data are divergent. However, the incidence of stroke is higher in men than in

women. However, because of the higher life expectancy for women, the absolute number of strokes is higher for women than for men.

1.3.3 Ethnic factors: Have also been identified. For example, the Manhattan registry showed twice as high an incidence of IC and CI in individuals of African and Hispanic descent as among Caucasians. In addition, the incidence of HFCs is higher among Asian. Socio-economic and cultural factors may be responsible for differences in the prevalence of risk factors observed in these populations, as well as genetic variations that have yet to be identified. A paternal or maternal family history of stroke doubles the risk. Apart from the rare monogenic diseases, there may be complex interactions with sex, unexplained by conventional genetic transmission. For example, women with a transient IC or ischemic accident (TIA) were more likely to have a maternal than paternal history of stroke, while in men, maternal and paternal history had the same prevalence.

1.4 Changeable risk factors

1.4.1 Cerebral infarction: [7] High blood pressure and metabolic factors: High blood pressure (HTA) is the most common risk factor found in CI patients. The relationship between blood pressure and stroke risk exists from the blood pressure values of 115/75 mm Hg (systolic/diastolic), and it is logarithmic. Indeed, each increase in systolic blood pressure of 20 mm Hg or diastolic blood pressure of 10 mm Hg is associated with a doubling of the risk of stroke, regardless of age.

1.4.2 Type 2 diabetes: [8] Is a well-established risk factor for AVCI that increases the risk by a factor ranging from 1.8 to 6.

1.4.3 Hyper cholesterolemia: [9] HDL cholesterol is a very high protein fraction, especially ApoA1. There is an inverse relationship between HDL cholesterol levels

and IC risk that may be higher in atherosclerosis-related accidents.

1.5 The role of tobacco and alcohol [10, 11]

- A meta-analysis of 32 studies showed that smokers had a nearly two-fold risk of IC.
- A meta-analysis of 35 observational studies showed that regular alcohol consumption greater than 60 g per day is associated with an increased risk of IC.

1.6 Contraception and hormone replacement therapy [12]

The role of female hormones in the occurrence of cerebrovascular pathology has also been studied. Thus, oral contraception is associated with an increased risk of IC with a relative risk of between 2 and 4. For example, the risk of cerebral infarction due to atrial fibrillation also increases significantly with age, from 1.5% in subjects aged 50 to 59 to 23.5% in the 80-89 age group.

2. Materials and Methods

2.1 Type and study period

This is a retrospective, descriptive study, conducted in the medical and surgical emergency room (UMC) over a 12-month period (January 2018 and January 2019).

2.2 Inclusion criteria

Being hospitalized during the UMC study period for an ischemic stroke defined according to WHO criteria.

2.3 Exclusion criteria

- Transitional Ischemic Accident
- Hemorrhagic Stroke
- A neurological deficit in relation to a head injury or a brain tumor or other cause.

2.4 Variables studied

Sociodemographic (age, sex.), risk factors clinics at

admission (NIHSS score, glasgow scores), hospitals (hospital duration, complication, management), prognostics.

2.5 Data analysis and application of statistical tests

Descriptive data analysis is based on transforming variables: by grouping using either coding or conditional transformations for tabulation and analysis.

2.5.1 Univariate analysis: The descriptive analysis of the variables is done by calculating the frequencies, central tendency or dispersion characteristics: the mean (m), the median (me), the variance (σ^2), standard deviation (σ) as well as the determination confidence intervals (95% CI) around the mean, and the median (me) for the risk $\alpha = 0.05$ for the quantitative variables. Determination of frequencies and confidence intervals for qualitative variables. The confidence interval around the mean is presented by the Standard Deviation around the mean ($mean \pm SD$).

2.5.2 Bivariate analysis: It is used to find the association between two independent variables, or between a dependent variable (to be explained) and other independent (explanatory) variables. The tests used are: the χ^2 test for independence or homogeneity, corrected by YATES, the exact test by FISHER, the KRUSKALL-WALLIS test for two groups, with the determination of the significance levels. STUDENT's test for two independent samples and analysis of variance (ANOVA) were used for the comparison of variables continuing. For the bivariate analysis, the comparison of interrupts variables between groups was carried out by non-parametric tests, the conformity and homogeneity test for the search for statistical associations between two qualitative variables; Fisher's

exact nonparametric test for comparison of small groups. We used Pearson's correlation tests to estimate the relationship between two quantitative variables. A relationship is considered significant.

3. Result

147 strokes: 110 AVCI (84%) (Figure 1). The age of the patients included in the study ranged from 49 to 77 years. The average age was 66 years - 10.9 years (Figure 2) 75% of AVCI occurring after 65 years. Patients with AVCI are divided into 47 women (42.72%) and 63 men (57.28%) (Figure 3).

3.1 Risk factors

The three main vascular risk factors: severe high blood pressure (P-0.007), diabetes (P -0.05) and emboligen heart disease (P-0.017). Other risk factors were in descending order: tobacco (13.09%), obesity (10.7%), dyslipidemia (08.3%), alcohol (4.1%). 17, 8% of patients had a history of formed stroke or TIA (Table 2).

3.2 TIA :transient ischemic attack

3.2.1 The neurological examination has admission:

The clinical examination at admission found consciousness disorders with a NIHSS score of 5 to 15 in 45.54% of cases (49 patients). 23 patients (20.9%) had a NIHSS score of 15, and a score of NIHSS-lt; 5 in 39 patients (35.45%) (Figure 4).

3.2.2 The cardiac assessment has admission:

Para clinical cardiac evaluation (electrocardiogram and echocoeur) objective a complete arrhythmia by atrial fibrillation (AC/FA) in 11.4% of cases, left atrial hypertrophy in 40% of cases and left ventricular hypertrophy in 79% of cases (Figure 5).

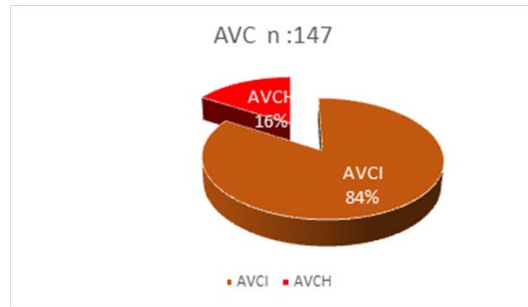


Figure 1: Distribution of patients by type of stroke.

Age range	Staff	%
More than 35	82	75
75 and Under	28	25
Total	110	100

Table 1: Breakdown of Patients by Age Group.

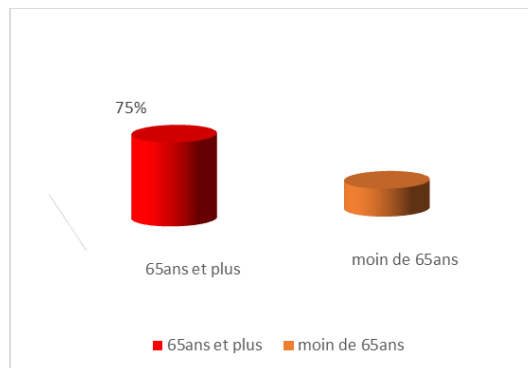


Figure 2: Distribution of patients by age.

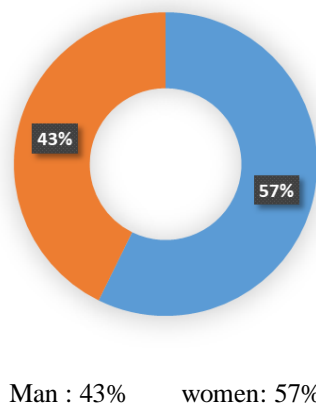


Figure 3: Distribution of patients by sex.

Risk factors	%
History of TIA or TIA	17,8
Tobacco	13,09
Obesity	10,7
Dyslipidemia	8,3
Alcohol	4,1

Table 2: Risk Factors.

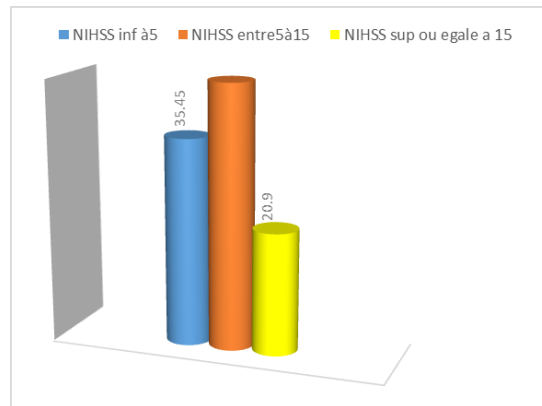


Figure 4: Percentage of Patients by NIHSS Score.

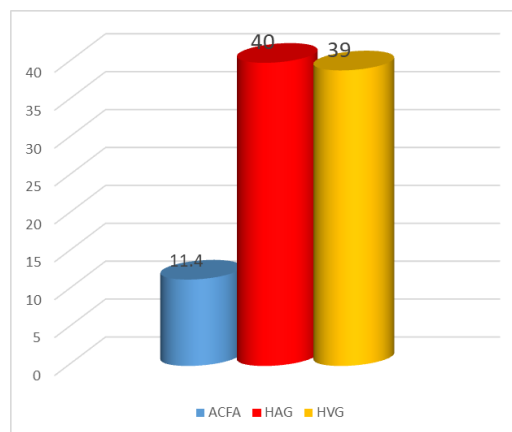


Figure 5: Percentage of patients by cardiac assessment at admission.

4. Discussion

is tripled [14, 15], this agrees with our study.

4.1 Age

According to the literature, Elderly people are particularly vulnerable to stroke when atrial fibrillation is present [13], the frequency of strokes after 65 years

4.2 Sex

The incidence of DALY was also higher in men than in women, according to the literature [16, 17]. the majority

of studies were in favor as well as a female preponderance with ratios between 0.82 and 0.97 [18].

4.3 Risk factors

The main risk factors of our study were significant: arterial hypertension, diabetes, cardiac embolism, for others the risk factors considered significant in several studies that we did not find such as, tabas, obesity, dyslipidemia, and alcohol. Hypertension as the main risk factor is described everywhere [19, 20].

4.4 Mortality rate

In our study, the mortality was 20%. This is consistent with most studies which have reported that the disparity in this rate is significant around the world with figures ranging from 10 to 30% [1]. Three risk factors associated with the poor prognosis: NHISS - 15 (p - 0.0001), anisocoria (p - 0.006) and long stay in intensive care (p - 0.013) our results are consistent with the literature because several authors have observed that: Anisocoria is considered to be a potentially fatal bad factor reflecting brain engagement [16, 19]. The most reliable neurological parameter of mortality is the NIHSS awareness score by the NIHSS score. Indeed [21].

5. Conclusion

Stroke is a major public health problem. Cardiovascular risk factors are dominated by HTA, diabetes and embologenous heart disease. Cardiovascular assessment (ACFA,HAG,HVG) plays an important role in stroke management. Prevention remains the only effective measure.

This prevention must be primary and secondary and involves the prevention of thromboembolic accidents. Anisocoria and depth of consciousness disorder predisposes to fatal evolution of AVCI

Conflict of Interest

The authors do not declare any conflict of interest.

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