

Clinical Epidemiological and Evolutionary Profile of Strokes in Intensive Care of Neurology Fann Hospital in Dakar

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Abstract

Stroke is defined by the World Health Organization as "the rapid development of localized or global clinical signs of cerebral dysfunction with symptoms lasting more than twenty-four hours which can lead to death, for no other apparent cause than a vascular origin. We conducted a retrospective, descriptive and analytical study. This study took place during the period from January 2018 to December 2020, in a period of 24 months on 352 patients hospitalized in neurological resuscitation unit 94 cases of patients presenting a cerebrovascular accident whatever the type or a frequency of 26.70%. The average age was 69.16 with a standard deviation of 18.93. The male sex was predominant at 59.57%. The main reason for hospitalization was characterized by an alteration of consciousness, in 35.10%. The first risk factor remains arterial hypertension in our series, in 57.44%. For the 59.57% evolution towards death, the diagnosis of ischemic stroke was the most represented, in 30%.

Keywords: Stroke; Vascular origin; Cerebrovascular; Neurological resuscitation

Introduction

Stroke is defined by the World Health Organization (WHO) as "the rapid development of localized or global clinical signs of cerebral dysfunction with symptoms lasting more than twenty-four hours which can lead to death, for no other apparent cause than a vascular origin. Our objective; determined the frequency, clinical aspect and evolutionary stroke in neurological resuscitation of fann [1].

Material and Methods

Study framework

Our study took place in the Neuro-reanimation unit of the Neurology department of CHU Fann in Dakar (Senegal).

The neuro-resuscitation unit has a capacity of eight patients, six of whom are in intensive care and two in the transition phase reserved for patients on the way to recovery. Each of the beds is equipped with vital functions monitoring equipment. Mixed neurologists and paramedics take care of patients 24 hours a day. It is a sub-regional university hospital structure, unique in terms of their reception capacity and bringing together many sub-specialties. Research and teaching have a big place there [2].

Type of study

This is a retrospective, descriptive and analytical study.

Study period

This study took place during the period from January 2018 to December 2020, in a period of 24 months.

Study population

Inclusion criteria: All the patients received in the Neuro-intensive care unit of the CHNU in Fann were included in the study.

Non-inclusion criteria: all patients hospitalized for a neurological pathology other than stroke [3].

Methods

We haven't done any sampling; we carried out a systematic selection of patients meeting the selection criteria [4].

We have made a collection sheet to facilitate data collection. The data were recorded on Excel software.

Variables in study

Our study variables are socio-demographic data and clinical aspects of stroke.

Analysis of the results

We used SPSS version 22 software for statistical analyzes. The confidence interval was calculated at 95% and the significance level retained at 0.05. Pearson's correlation tests, *Chi-square test* and Anova test were used for correlation and comparison of data [5].

Ethical considerations

As the study is retrospective, we did not seek consent from patients, however their identity and data collected is on condition of anonymity.

Results

On 352 patients hospitalized in neurological resuscitation unit 94 cases of patients presenting a cerebrovascular accident whatever the type or a frequency of 26.70% (Tables 1-6).

Table 1: It appears from this table that the average age is 69.16, the maximum=99, the minimum=38 and the standard deviation is 18.93.

Age group (year)	Effective	%
(38-48)	12	12,7659574
(49-59)	16	17,0212766
(60-69)	16	17,0212766
(70-79)	30	31,9148936
(80-89)	16	17,0212766
(90-99)	4	4,25531915
Total	94	100

Table 2: The sex ratio is 1.5 in favor of the female sex.

Sex	Effective	%
Male	56	59,5744681
Féminine	38	40,4255319
Total	94	100

Table 3: The table shows that alteration of consciousness is the most frequent reason for consultation with 33 cases, or 35.1%.

Reason for hospitalisation	Effective	%
Motor deficit of the left half-body	6	6,38297872
motor deficit of the left half body and language disorder altered consciousness	13	13,8297872
altered consciousness and left focal seizure	33	35,106383
	2	2,12765957

Left hemi-bodily motor deficit, dysarthria and vigilance ruble	1	1,06382979
left motor deficit and altered consciousness	5	5,31914894
motor deficit of the right half of the body and pneumonia	1	1,06382979
motor deficit in the right half of the body, language disorder		
	15	15,9574468
motor deficit of the right half of the body disturbance of consciousness	10	10,6382979
motor deficit in the right half of the body	6	6,38297872
seizures and speech disorder	1	1,06382979
left focal seizures	1	1,06382979
Total	94	100

Table 4: Hypertension is the most common antecedent with 54 cases, or 57.44%.

Antecedents	Effective	%
HTA (arterial hypertension)	54	57,4468085
Transient Ischemic Attack	2	2,12765957
NO	20	21,2765957
HTA+Breast Cancer	1	1,06382979
HTA+Diabetes	1	1,06382979
HTA+Stroke Ischemical	1	1,06382979
Ischemique stroke+abdominal surgery	4	4,25531915
	1	1,06382979
HTA+	1	1,06382979
Stroke ischemical	4	4,25531915
Cardiopathy	3	3,19148936
Diabetes+HTA+Hypothyroidism	1	1,06382979
Dyslipidemia	1	1,06382979
Total	94	100

Table 5: The evolution is marked by death with 56 cases or 59.57%.

Evolution in hospitalization	Effective	%
Exeat or good evolution	37	39,3617021
Deceased	56	59,5744681
Transfer	1	1,06382979
Total	94	100

Table 6: It emerges from this table that the ischemique stroke is the most represented diagnosis with 45 cases or 47.87%, 30 cases or 31.87% of Stroc Haemorrhagic and 18 cases of recurrence of stroke I or 19.15%.

Diagnostic	Effective	%
ischemique stroke+	45	47,8723404
residual ischemic stroke	18	19,1489362
Stroc Haemorrhagic	30	31,9148936
Subarachnoid hematoma	1	1,06382979
Total	94	100

Discussion

We have 352 patients hospitalized in neurological resuscitation unit 94 cases of patients presenting a cerebrovascular accident whatever the type or a frequency of 26.70%.

The male sex was the most predominant in our series with 59%, against 38% of the female sex with a sex ratio of 1.5 in favor of the male sex. The male predominance was noted by LannZel A. A female predominance noted by Ahmed. The variability of the population may explain the sex difference [6-8].

Age: The most affected age group was 70-79 Years, with an average of 69.16 and the standard of 18.93. This can be explained by the increase in cardiovascular risk factors and an increase in the frequency of heart disease embolism at this age including cardiac fibrillation. High blood pressure was the most dominant risk factor in 54 cases, or a frequency of 57.44%.

The predominance of hypertension was also noted by Elisha thera in Mali. High blood pressure plays a major role in the predisposition to stroke by aggravating atherosclerosis of the arch of the aorta and arteries at encephalic destiny and by causing atherosclerosis and lipohyaline degeneration of the small terminal cerebral perforating arteries. Hypertension can cause embologenic heart disease, which can lead to ischemic stroke as well as hemorrhagic stroke by rupture of small vessels intended for thalamo streak or lobar hematoma by rupture of a vascular malformation. Main reason for hospitalization was predominantly altered consciousness, in 35.10%. This can be explained by the fact that an alteration of consciousness is among the criteria for hospitalization in intensive care [9].

The lesion aspect was represented by ischemic stroke, in 47.84% versus 31.87% hemorrhagic stroke. The course was marked by death in 59.57%. The high mortality rate was higher than Diarra souley. This high mortality observed in our study could be explained by the severity of stroke and also by a lack of adequate technical platform to allow a better approach to this pathology [10].

Conclusion

Stroke is a major public health problem, the best diagnostic and management approaches through improving the technical platforms improved the vital prognosis and will decrease the death rate which remains high in our series.

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