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Epidemiological Profile of Ischemic Vascular Cerebral Accidents in the "a" Unit at the Cardiology Department of the G-Point Chu

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Abstract

From January 1, 2020 to December 31, 2020, out of 202 patients hospitalized in the "A" unit in the cardiology department of the CHU Point G; 24 were for ischemic stroke, for a prevalence of 11.88%.

The mean age in the study was 55 years old.

The female sex was predominant with 66.67%.

High blood pressure with approximately 62.50% frequency was the most common of FRCV.

Motor deficit was the frequent reason for consultation with 45.83%.

After tachycardia with 87.50%; heart irregularity accounted for 79.17% and heart murmur was noted in 70.83%.

Stage II hypertension was the most common on admission.

All of our patients presented with neurological signs on examination with the predominance of facial paralysis and right hemiplegia.

Left atrial hypertrophy 95.83%; AF 58.33% and left ventricular hypertrophy 50.00% were the major abnormalities on the ECG.

On doppler echocardiography: the dilation of the left atrium and the left ventricle represented 70.83% and 37, respectively, 50%. LV systolic function was impaired in 29.17% of patients. Hypercreatininaemia with 33.33% was the predominant laboratory abnormality. Anemia and elevation of LDLc each accounted for 29.17% of the laboratory results. Mitral stenosis with 50.00% was the main dominant etiology. The exit was marked by the persistence of sequelae in 50.00% of patients.

Beta blockers; ACE inhibitors and AVK were the predominantly used drugs with 83.33% respectively; 70.83% and 45.83%.

Key Words: ischemic stroke; cardiology unit a; chu point g

Introduction

Stroke is defined as a sudden onset neurological deficit due to ischemia or cerebral hemorrhage. Here we focus on ischemic stroke, which accounts for about 75% of all strokes. It is the leading cause of long-term morbidity and disability in Europe as in other industrialized countries. The incidence of stroke varies between different European countries. It is estimated between 100 and 200 new strokes / 100,000 inhabitants / year [1].

This mortality also remains high in Sub-Saharan Africa due to insufficient technical facilities [2].

Thus, in Mali, in 2013, a frequency of 62.75% of ischemic cerebrovascular accident (stroke I) was reported in course of embologenic heart disease [3].

We found it interesting to conduct this study, the general objective of which was to assess the role of ischemic strokes during hospitalization.

Objective:

This work, which was carried out in the "A" unit in the cardiology department of the CHU Point G concerning ischemic stroke, aims to:

- Determine the prevalence,
- Describe the clinical and complementary aspects,
- And identify the main aetiologies.

Methodology:

The study was planned and carried out from January 1, 2020 to December 31, 2020 in unit `` A '' in the cardiology department of the Point G University hospital.
Any patient hospitalized for ischemic stroke documented by at least a brain CT. Were excluded:
- Strokes not documented by brain CT
- Documented hemorrhagic strokes,
- Ischemic strokes in outpatients

Each patient in the sample received individual data support with systematic recording of socio-epidemiological and clinical data and the results of additional examinations. Their analysis was carried out on SPSS 18 software and data entered on world 2010. The statistical test used was the ki2.

Results:

During the study period, out of 202 patients hospitalized in the "A" unit, 24 suffered from ischemic stroke, for a prevalence of 11.88%.
The mean age in the series was 55 ± 10 years with extremes at 31 and 84.
The predominance was female with 66.67% (16 cases) against 33.33% (8 cases) of the male sex. The sex ratio was 2.12 in favor of women.
Hypertension with 62.50% (15 cases) frequency was the preeminent risk factor. Tobacco followed; diabetes and hormonal contraception with respective frequencies at 20.83% (5 cases); 12.50% (3cas) and 4.17% (1cas).
The most frequent reasons for consultation were: motor deficit 45.83% (11 cases); headache 37.50% (9 cases); dysarthria 58.33% (14 cases); aphasia 25.00% (6 cases).
The major abnormalities on cardiac examination were tachycardia 87.50% (21 cases); irregular BDCs 79.17% (19 cases); valve murmur 70.83% (17 cases); bradycardia 8.33% (2 cases).
The blood pressure at admission according to the WHO classification was at: stage I 25.00% (6 cases); Stage II 41.67% (10 cases) and Stage III Stage 33.33% (8 cases)
The hemibody deficit was the major abnormality on neurological examination present in all patients with a predominance of the right side, i.e. 54.17% (13 cases), followed by left or right facial paralysis with 75.00% (18 case).
AF with 58.33% (14 cases) was the most common defect on the ECG after left atrial hypertrophy which accounted for 95.83% (23 cases); Left ventricular hypertrophies 50.00% (12 cases) ranked third and followed: left bundle branch block 25.00% (6 cases); the anomaly of the repolarization of the T wave 12.50% (3 cases) and the Q wave of necrosis or 4.17% (1 case).
The results of the cardiac Doppler ultrasound objectified:
dilation of the left atrium in 70.83% (17 cases); the left ventricle dilated 37.50% (9 cases); wall hypertrophy 33.33% (8 cases); valve lesions accounted for 91.67% (22 cases); pericardial effusion 16.67% (4 cases); impaired LV systolic function 29.17% (7 cases); segmental kinetic abnormalities (akinesia and hypokinesia) 20.83% (5 cases) and intracavitary thrombus 8.33% (2 cases).
Supra-aortic trunks ultrasound: Both carotids were atheromatous in 62.5% (14 cases) with the presence of thrombus in 4.17%.
Biological results noted: anemia 29.17% (7 cases); hyperplatelet 12.50% (3ca) hyperglycemia 25.00% (6 cases); hypercreatinemia 33.33% (8 cases) hypercholesterolemia (elevated LDLc) 29.17% (7 cases); HIV positive 4.17% (1 case) and high TSHus 20.83% (5 cases).
The main aetiology was the valve disease with 75.00% (18 cases) of which the mitral stenosis was major with 50.00% (12 cases) and the aortic stenosis 12.50 (3 cases). Other etiologies (hypertension, hyperthyroidism, ischemic heart disease) accounted for 25.00%.
The drugs most used during hospitalization were: ACE inhibitors 70.83% (17 cases); anticoagulants (AVK) 45.83% (11 cases); antiplatelet agents 62.50% (15 cases); statins 95.83% (23 cases); Beta-blockers 83.33% (20 cases) and digitalis 4.17% (1 case). All patients benefited from physiotherapy during their hospital stay.
The average hospital stay was 10 days with extremes of 3 days to 27 days. During hospitalization; the favorable outcome (complete disappearance of neurological signs) was observed in 37.50% (9 cases); 50.00% (12 cases) retained the neurological sequelae on discharge and the observed death was 12.50% (3 cases).

Discussion:

In the study the prevalence of ischemic stroke was 11.88%; rate lower than 19.85% of **Traoré S.** [4]. The large size of our sample would be the explanation. Elsewhere it was a neighbor of those of the **Diarra S.** and **Kimbally G**. [5 and 6].
The mean age in the study was 55 + / - 10 years similar to the study by **Fahd A.** and **Gakou Y**. [7 and 8].
Hypertension with approximately 62.50% frequency was the most frequent of the FRCV; rate similar to those of **Lannuzel** and **MICHELE** [9 and 10] but lower than the 83.9% of **Zabsonré** [11]. In accordance with the literature; smoking was the second FRCV with 20.83% [12 and 13].
All of our patients presented with neurological signs. The frequently encountered reason for consultation was motor deficit with 45.83% and headache 37.50%. This result cannot be superimposed on the work of **KODIO A.** and **Traore S.** [3 and 4] where dyspnea was the main symptom of consultation with respectively 6.86% and 58.30%. This could be explained by the particularity of the studies because their work was focused exclusively on strokes at course of embologenic heart disease and AF on rheumatic valve disease.
Heart irregularity at 79.17% and valve murmur 70.83% were the major abnormalities on cardiac auscultation after tachycardia estimated at 87.50%. On admission, all patients had above normal blood pressure levels with stage II the most common according to WHO classification 41.67%. In accordance with **KODIO A**. [3].
Facial paralysis with 75.00% was the predominant clinical neurological abnormality followed by right hemiplegia with 54.17%.
As elsewhere Left atrial hypertrophy with 95.83% was the most described electrical abnormality. **COULIBALY T**. [14] noted the predominance of left ventricular hypertrophy in his work and which is moreover classic in many authors following the

predominance of hypertension [3,7 and 15]. AF represented 58.33% compared to 5.39% in **KODIO A**. [3].
Doppler echocardiography; valve disease predominated with 91.17% against 10.99% and 75.10% respectively in **Traoré S**. and **F. Damorou** [4 and 13]. The main aetiology found was mitral stenosis with 50.00% unlike many studies [16 and 17] where hypertension is the leading etiology. We explain our case by the choice of the term which treated ischemic strokes in a cardiological environment.
The most used drugs were beta blockers, ACE inhibitors and VKA with 83.33% respectively; 70.83% and 45.83%. According to the work of **ALBAKAYE M**. [18]; calcium channel blockers were used in 68.5% of prescribers and we found another different practice in **Germaine** and **ABDELMOUMENE et al** [19 and 20], where ACE inhibitors were first-line.
The average hospital stay was 10 days; less than 17 days of **KODIO A**. [3]. Half of our 50.00% patients were discharged from hospital with persistent sequelae; observation made by **F. Damorou** [13].

Conclusion:

Ischemic strokes occupy an important place in cardiological hospitalization. The aim of this work is to establish a standard for ischemic strokes in cardiology and to identify the main aetiologies.
Ischemic stroke is a major public health problem. The management being difficult especially in the presence of a causal heart disease; and development generally punctuated by serious consequences, prevention remains the only effective measure.

Abbreviations list:
AF = atrial fibrillation
Ao = aorta
AVK = antivitamin k
PA = pulmonary artery
IAo = Aortic insufficiency
AVCI = Ischemic stroke
ACVH = hemorrhagic stroke
AIC = ischemic attack constituted
TIA = transient ischemic attack
ATB = antibiotics
AVB = atrioventricular block
BBD = right bundle branch block
CHU = university hospital center
ECG = electrocardiogram
ESV = ventricular extrasystole
ETT = trans-thoracic ultrasound
ETO = transesophageal ultrasound
FE = ejection fraction
FRCV = cardiovascular risk factors
GVM = large mitral valve
LMWH = low molecular weight heparin
HVG = left ventricular hypertrophy
INR = international normalized ratio
IT = Tricuspid insufficiency
ACEI = converting enzyme inhibitor
IVG = Left ventricular failure
IVD = Right ventricular failure
MI = Mitral insufficiency
HF = Heart failure
OD = right atrium
OG = left atrium
WHO = World Health Organization
POD = pressure in the right atrium
POG = pressure in the left atrium
RAo = aortic stenosis
MR = mitral stenosis
S.S = systolic murmur
TSH = thyroid stimulating hormone
VT = ventricular tachycardia
LV = left ventricle

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