SPECIFICITY OF BLOOD PRESSURE VARIABILITY AND ISCHEMIC TYPE STROKE IN PATIENTS WITH CHRONIC HEART DEFICIENCY

Xolmurad Axmedov1, Xusniddin Ikromov2, Xasan Urolov3

1Doctor of Medical Sciences, Head of the Department of Internal Medicine No. 3, Tashkent Medical Academy, Tashkent, Uzbekistan.
2Master's Degree, the Faculty of Cardiology, the Department of Internal Medicine No. 3, Tashkent Medical Academy, Tashkent, Uzbekistan.
3Master's Degree, the Faculty of Cardiology, the Department of Internal Medicine No. 3, Tashkent Medical Academy, Tashkent, Uzbekistan.

1holmur.ahmedov@tma.uz, 2Ikromov402@gmail.com, 3Ikromov402@gmail.com

ABSTRACT

To study the specificity of diurnal variability of Arterial Blood Pressure (ABP) during the early and late recovery periods of patients with ischemic stroke (II) with Chronic Heart Failure (CHF) and its interaction with the course of chronic heart failure.[1,3]

Based on the study of the medical history of patients who underwent ischemic stroke in stage 3 clinics in 2017-2019, the level of CHF incidence determined in them. According to the results, in patients with ischemic stroke, CHF occurs as a concomitant disease in 57.8% of cases.

In addition, Hypertension detected in 95.4% of patients with CHF and ABP rates observed to be relatively high, and CHF found to have a higher clinical profile and functional class.[2,4]

Although there was a difference between the daily changes in ABP in all patients, all patients were given standard treatment and antihypertensive drugs simultaneously, despite differences between the functional classes of CHF. Daily blood pressure monitoring performed in 3.5% of patients. This indicates that this condition has not been thoroughly studied and given sufficient attention.

Keywords: Ischemic stroke, Arterial Blood Pressure, Chronic Heart Failure, Daily monitoring of arterial blood pressure, Daily profile of arterial blood pressure.

I. INTRODUCTION

According to many epidemiological data, cohort studies, and observations from several countries, ≈10% to 54% of stroke patients have CHF, almost ≈85% of patients have HD (Hypertension Disease), and ≈9% of cases CHF is one of the causes of ischemic stroke. Numerous scientific studies have been conducted on the induction of ischemic stroke and the effect of ischemic stroke on the evening, but the effect of ischemic stroke on the daily blood pressure profile and the course of ischemic stroke has not been thoroughly studied.[5]

Among the 58 million deaths worldwide due to various causes in 2005, Chronic Heart Disease (CHD) accounted for 30%. This ratio is equal to infectious diseases, malnutrition, and maternal and perinatal syndrome. It is essential to realize that many of these deaths (46%) occur among people under 70 who have a higher standard of living. In addition, 79% of the disease burden associated with chronic heart disease is in this age group.[6]

Between 2006 and 2015, mortality from non-communicable diseases (half of which will be attributed to cardiovascular disease) is expected to increase by 17%, while mortality from infectious diseases, malnutrition, and maternal and perinatal diseases will reduce by 3% people. Almost half of the disease burden in low- and middle-income countries has been attributed to non-communicable diseases.
A large part of this morbidity and mortality can be prevented through population-based strategies and cost-effective interventions that make both patients with established diseases and those at high risk of the affordable disease. Blood pressure control is also essential for certain patients with heart failure, especially in patients with preserved ejection fraction. However, because there may be a reverse curve correlation between blood pressure and the prognosis of patients with heart failure, lowering blood pressure can lead to a poor prognosis. Regarding the optimal blood pressure target for patients with heart failure, there is little reliable evidence, but according to current guidelines, a value close to 130/80 mmHg seems to be sufficient. [7]

II. MATERIALS AND METHODS

BPV measurements could be obtained in various ways, i.e. continuous BP recording, BP's traditional office activities, 24-hour outpatient BP fluctuations could be assessed at different time intervals. It is essential to distinguish these different components and methods, as the mechanisms and determinants affecting each type of BVP and their clinical significance and prognostic effects may differ.[12]

65 patients were selected for the study. In 30 of the selected patients, the leading group consisted of patients with CHF and ischemic stroke (within 1-6 months). As a control group, 35 patients consisted only of patients with CHF. To determine the daily profile of ABP based on daily monitoring of arterial blood pressure (DMABP) in patients and to study the specific features of the course of CHF in both groups. The study was conducted in TMA 3 clinic in 2017-2019.

III. RESULTS

According to the results of the prospective analysis, the results of the Clinical Status Assessment Scale (CSAS) (Mareeva V.Yu.) showed that in the leading group of patients, the clinical symptoms of CHF FS were high, i.e. 8.6 points in FS III. According to the Syndrome Patient Quality of Life Assessment Scale (Minnesota Survey), CHF was 34.5 points in patients with FS II and 56.5 points in patients with FS III in the leading group. According to the distribution of patients on the Rankine Scale, 47% of the leading group had 1 point, 23% had 2 points, 10% had 3 points, and 20% had no symptoms.

According to the daily monitoring of arterial blood pressure, the daily profile of patients in the primary and control groups was determined. According to the results of systolic blood pressure in the leading group, 10% of patients in the "over dipper" control group had a 3% "over dipper" profile, in 20% of the leading group - in the "dipper" control group - 40%, in 37% of the leading group in the non-dipper control group, 47% had a non-dipper profile, and in the leading group, 33% had a night peaker profile, and in the control group, 10% had a night peaker profile.

According to diastolic pressure, 13% of patients in the leading group had an "over dipper" profile in the control group, 7% had an "over dipper" profile in the control group, 40% had a "dipper" profile in the "dipper" control group, and 37% had a "non-dipper" profile in the leading group, 47% had a non-dipper profile in the control group, and in 33% of the leading group, a night peaker had a 10% night peaker profile.

IV. DISCUSSIONS

These figures suggest that CHF observed as a co-morbidity in 57.8% of patients with ischemic stroke. This figure was high, but insufficient data on cardio cerebral syndromes indicated that the study of this area was a topical issue. The follow-up results did not reveal a reliable difference between the daily profiles of systolic and diastolic ABP in both groups. There was an increase in the number of patients with "over dipper" and "night peaker" profiles in the leading group with an increase in CHF FS III. Accordingly, the number of patients with "dipper" and "non-dipper" profiles decreased. In the control group, similar indicators were identified but not as pronounced as in the leading group.[8,9]

The brain and other vascular beds used necessary resources to maintain dynamic autoregulation and relatively constant blood flow at different blood pressure levels. [10,11] In disease research, the ability to autoregulate blood flow could be impaired, making it possible for stroke-prone patients such as our cohort to be sensitive to changes in blood flow resulting from blood pressure variability. Although we did not know the causal mechanism, the independent association of high BPD with poor outcomes was strong, and this analysis provides evidence seen in a vulnerable population of patients with a history of stroke.
V. CONCLUSION

1. Occurrence of ADCC (Acute Disorders of Cerebral Circulation) in the ischemic type in patients with CHF had a progressively negative effect on the variability of arterial blood pressure in patients and drastically changed the daily profile.

2. The daily profile of patients with ischemic stroke with CHF consisted mainly of non-dipper, night-peaker, and over-dipper groups.

3. CHF levels were higher in FS in patients with CHF who had a daily non-dipper and night-peaker profile than those with an ischemic stroke.

4. Correlation of CHF with only severe FS detected in the group of patients belonging to the over-dipper daily profile of patients with ischemic stroke who had CHF.

CONFLICT OF INTERESTS AND CONTRIBUTION OF AUTHORS

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