

in other patients that are normal patients about 36%. These observations suggest that both ischemic and hemorrhagic strokes can lead to significant cardiac complications, necessitating a multidisciplinary approach to management. Early identification and treatment of arrhythmias may improve outcomes for stroke patients, highlighting the importance of integrating cardiological assessment in the overall care of individuals who experience strokes.

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M. A. Abdullah, M. A. Maryam

*Scientific supervisors: Ph.D., Associate Professor E. G. Malaeva,
Ph.D., Associate Professor E. V. Tzytko*

*Educational Establishment
«Gomel State Medical University»
Gomel, Republic of Belarus*

ARTERIAL HYPERTENSION IN STROKE PATIENTS

Introduction

Stroke is the world's second-leading cause of death and the third-leading cause of disability [1]. With an estimated 5.5 million deaths each year globally. The burden of stroke is not limited to its high death rate, its high morbidity also leaves up to 50% of survivors permanently impaired [2]. Stroke is a clinical state that includes an abrupt loss of focal brain function and symptoms that either continue longer than 24 hours or result in (early) death [3]. Strokes are generally categorized into two major types: ischemic stroke and hemorrhagic stroke. Ischemic stroke is caused by a disruption in the blood flow to a portion of the brain, resulting in an abrupt loss of function, whereas hemorrhagic stroke is caused by a blood vessel rupture [2]. Most strokes (80%) are ischemic, while the proportional burden of hemorrhagic versus ischemic stroke varies by population [4]. The cause of stroke and its hemodynamic implications vary depending on stroke subtype and disease presentation time. However, high blood pressure, also known as hypertension, is one of the most important modifiable risk factors for stroke. [5]. Elevated blood pressure has the potential to rupture these tiny perforators, resulting in a hemorrhagic stroke, or to obstruct them, leading to an ischemic stroke. Controlling the major risk factors for stroke, such as hypertension, is necessary to prevent strokes. Therefore, it is important to prevent stroke by monitoring blood pressure regularly and improving lifestyle.

Goal

To analyze the rate and stages of arterial hypertension in patients with stroke.

Material and methods of research

This is cross-section single-centre study of 30 patients with arterial hypertension (AH), conducted in the neurology department of Gomel city clinical hospital no.3 (Belarus). This study was conducted for a period of 1 month in 2025. The mean age of patient starts from 50 years to 85 years, in which 14 are males and 9 are females out of 23 patients having AH.

The results of the research and their discussion

The 23 patients with stroke are having AH (76.7%), it is more pronounced in males 60.9% than in females about 39.1%.

In patients we can see in them multiple stages of arterial hypertension but most common is stage 2 and risk 4 which is about 60.9%. So out of 17 male patients 14 patients have hypertension. Average HR is about 60–120 bpm. In females 13 patients out of them 9 are having hypertension. Average HR 55–110 bpm (tab. 1).

Table 1 – Type of AH in stroke patients

Stages	Ischemic stroke		Hemorrhagic stroke		Total patients N= 23
	F	M	F	M	
AH stage 1 risk 4	1	1	0	0	2 (8.6%)
AH stage 2 risk 3	1	1	0	1	3 (13%)
AH stage 2 risk 4	5	5	0	4	14 (60.9%)
AH stage 3 risk 4	0	2	2	0	4 (17.4%)
Total	7	9	2	5	23 (100%)

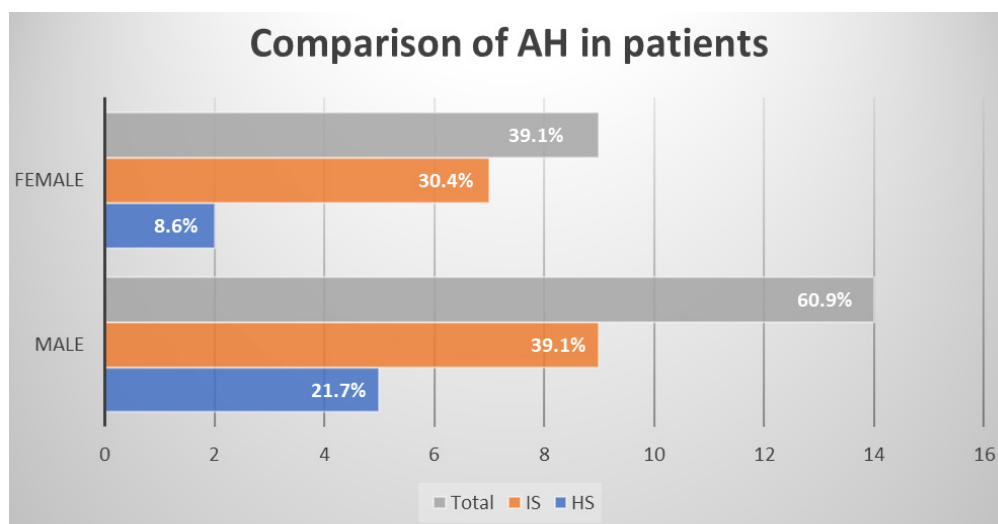


Figure 1 – Arterial hypertension in patients with stroke

In comparison we can observe that a higher percentage of male patients experienced strokes 60.9% as compared to females 39.1%. In patient's due to AH, higher incidence of ischemic strokes is present as compared to hemorrhagic strokes in all patients.

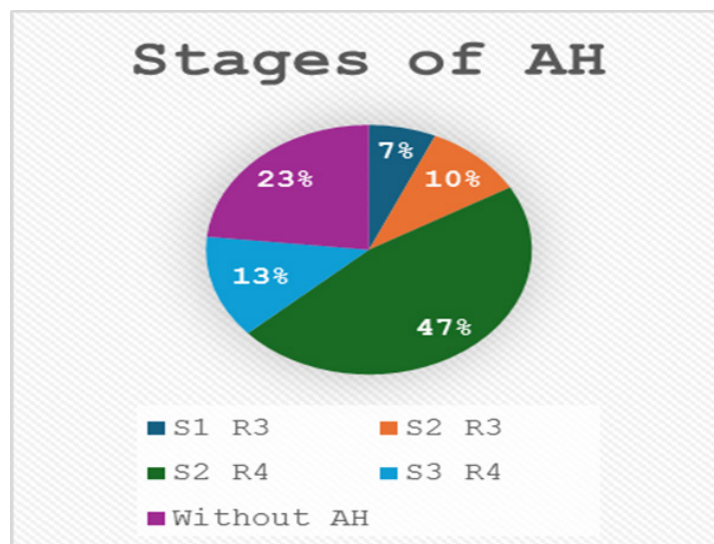


Figure 2 – Stages of arterial hypertension in patients with stroke

Conclusion

We conclude that among all patient's 76.7% are having arterial hypertension. The most predominant is AH Stage 2 Risk 4 (47%). We can also observe that in males (60.9%) they have higher percentage of the strokes caused by AH as compared to females (39.1%). The most common ischemic stroke is present in patients. AH correction is most important because it is a leading cause of stroke in patients.

The arterial hypertension is a significant risk factor for stroke, influencing both the incidence and type of cerebrovascular events. Effective management of AH is crucial in preventing strokes, particularly ischemic and hemorrhagic types. Continuous monitoring and intervention strategies are essential for at-risk patients to reduce the burden of stroke and improve overall outcomes.

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