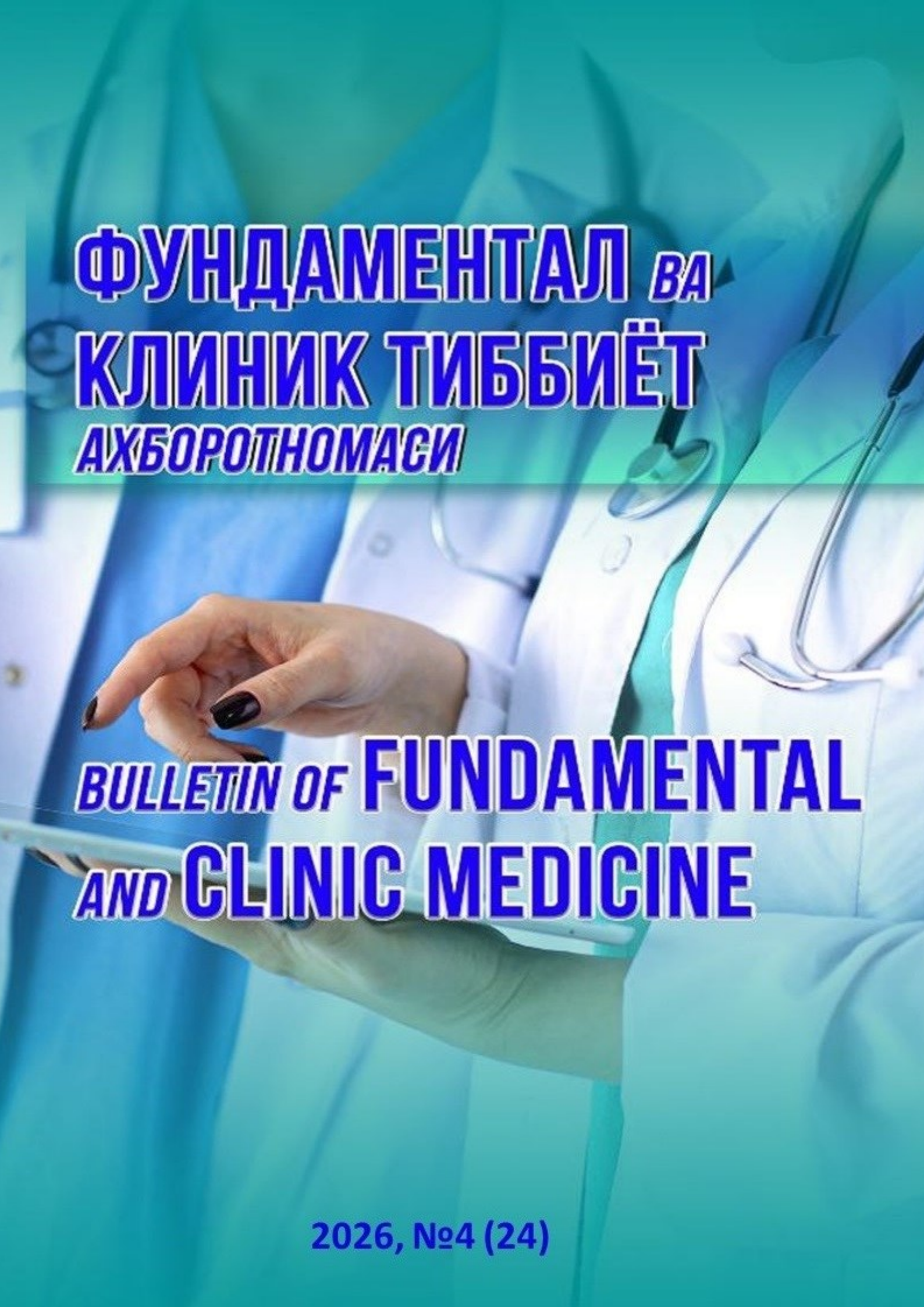

ФУНДАМЕНТАЛ ВА КЛИНИК ТИББИЁТ АХБОРОТНОМАСИ

BULLETIN OF FUNDAMENTAL AND CLINIC MEDICINE

2026, №4 (24)

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РЕСПУБЛИКИ УЗБЕКИСТАН

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THE VALUE OF THE BRAIN NATRIURETIC LEVEL PEPTIDES IN THE EARLY DIAGNOSIS OF CHRONIC HEART FAILURE IN PATIENTS WITH ARTERIAL HYPERTENSION

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Resume. *arterial hypertension is the most common cause of the development of chronic heart failure. The study of the problem of heart failure in the early stages of its development is of particular interest to clinicians. There is evidence of the possibility of early diagnosis of CHF of any etiology and prediction of adverse outcomes of heart failure using B – type Natriuretik Peptide (BNP).*

Keywords: *arterial hypertension, chronic heart failure, sodium-urtic peptide, echoacardiography, Dopplerography.*

АРТЕРИАЛ ГИПЕРТЕНЗИЯЛИ БЕМОРЛАРДА СУРУНКАЛИ ЮРАК ЕТИШМОВЧИЛИГИНИ ЭРТА ТАШХИС ҚИЛИШДА МИЯ НАТРИУРЕТИК ДАРАЖАДАГИ ПЕПТИДЛАРНИНГ АҲАМИЯТИ

Пўлатова Ш.Ҳ.

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Резюме. *Артериал гипертензия сурункали юрак етишмовчилигининг энг кенг тарқалган сабабидир. Юрак етишмовчилигининг дастлабки босқичларини ўрганиш клинисенлар учун алоҳида қизиқиш уйғотади. Ҳар қандай этиологияли ЧФни эрта ташхислаш ва Б-турдаги натриуретик пептид (БНП) ёрдамида юрак етишмовчилигининг салбий натижаларини башорат қилиш имкониятига оид далиллар пайдо бўлди.*

Калит сўзлар: *артериал гипертензия, сурункали юрак етишмовчилиги, натриуретик пептид, экокардиография, Допплер ултратовуш текшируви.*

ЗНАЧЕНИЕ УРОВНЯ НАТРИУРЕТИЧЕСКИХ ПЕПТИДОВ В ГОЛОВНОМ МОЗГЕ ДЛЯ РАННЕЙ ДИАГНОСТИКИ ХРОНИЧЕСКОЙ СЕРДЕЧНОЙ НЕДОСТАТОЧНОСТИ У ПАЦИЕНТОВ С АРТЕРИАЛЬНОЙ ГИПЕРТЕНЗИЕЙ

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Резюме. *артериальная гипертензия служит самой частой причиной развития хронической сердечной недостаточности. Изучение проблемы сердечной недостаточности на ранних этапах ее развития вызывает особый интерес клиницистов. Появились данные о возможности ранней диагностики ХСН любой этиологии и прогнозирования возникновения неблагоприятных исходов сердечной недостаточности с помощью B – type Natriuretik Peptide (BNP).*

Ключевые слова: *артеральная гипертензия, хроническая сердечная недостаточность, натрийуртический пептид, эхокардиография, допплерография.*

Relevance. Chronic heart failure (CHF) is the most frequent and serious complication of cardiovascular diseases. Arterial hypertension is the most common cause of CHF. The study of the problem of heart failure in the early stages of its development is of particular interest clinicians [5]. At the same time, the diagnosis of CHF in the early stages is important to prevent its further progression [1]. To date, there are data on the possibility of early diagnosis of CHF of any etiology and prediction the occurrence of adverse outcomes of heart failure with the help of a brain natriuretic peptide – B – type Natriuretik Peptide (BNP) In recent years, as a marker of the early (preclinical) stage of CHF in patients with AH is used natriuretic peptide group B (BNP). BNP in blood serum it is becoming the standard in the early diagnosis of CHF. The main stimulus to increased BNP secretion is a volume overload of the left ventricle[2].

The aim of the study was to study the dependence of the development of CHF in patients with arterial hypertension on the level of brain natriuretic peptide (BNP) [5]. Materials and methods of research [6]. We examined 80 patients, including 38 women and 42 men with arterial hypertension with and without clinical signs CHF aged 35 to 65 years, while 32 (40%) patients had chronic heart failure on the background of arterial Hypertension (AH) and 48 (60%) patients with AH without clinical and instrumental signs of CHF[7]. A comprehensive examination of patients included the collection and analysis of complaints and anamnestic

data, clinical examination, general clinical, laboratory and instrumental studies such as: standard ECG, Doppler EchoCG, 24-hour Holter ECG monitoring, chest X-ray [10]. All our patients underwent a quantitative assessment of the concentration of brain natriuretic peptide (ng/ml) in blood plasma by the method of enzyme immunoassay [8].

Discussion of the results obtained. In arterial hypertension , chronic pressure loading leads to thickening of the walls of the left ventricle with a normal size of its cavity and preserved systolic function [2]. This is how diastolic heart failure is formed. The corresponding type of remodeling is called concentric. The tension developed by the left ventricle is determined by the load on the myocardium. The main trigger of increased BNP release is increased end-diastolic pressure (CDP). The patients with hypertension examined by us, depending on the level of BNP , did not significantly differ in gender, duration of hypertension, body mass index, frequency of occurrence of CHF symptoms and regularity of taking antihypertensive drugs [11]. However, an increase in the level of BNP was associated with the age of patients. During our examination, there was some unreliable tendency to increase the NUP in women compared to men, and in more obese patients there was a tendency to decrease the level of NUP. The main indicators of blood pressure between the analyzed groups did not differ significantly. According to echocardiography , an increase in the thickness of the LV in the group of patients with hypertension with a level of MNP>200 (two hundred) pg /ml with comparable indicators of the size of the left atrium, the index of relative wall thickness and LV myocardial mass, may indicate that the increase in MNP occurs not only due to the age of patients, but also the development of adaptive LV remodeling. It was assumed that the dynamics of the level of MNUP and NT-pro-MNUP in the direction of both increasing and decreasing will be able to individualize the assessment of the clinical condition of a patient with CHF, become a reliable indicator of the risk of adverse clinical events, and also be considered as an argument in favor of changing the treatment strategy [12]. The patients examined by us were divided into two groups. The first group consisted of 32 patients with hypertension with obvious signs of CHF. Such as – shortness of breath, fatigue, swelling and palpitations. And the second group included 48 patients with hypertension without obvious clinical and instrumental signs of CHF. The level of BNP was studied in all the examined patients . Analysis of the survey data indicates that in the first group (with obvious signs of CHF), thirty-one (96.8%) patients had a BNP level higher than normal values and amounted to 350+ 20.8 pg/ml.

In the second group, there was an increase in the concentration of BNP in eleven patients (22.9%) who had no obvious clinical signs of CHF. Level BNP in this group was also higher than normal values - 220+ 10.1 pg/ml. Conclusion. Analysis of the BNP results in our patients showed that in 11 out of 48 patients without obvious signs of CHF, the BNP level exceeded the norm, i.e. it was above 200 pg/ml. This means that in these patients, in the absence of complaints and clinical manifestations, there is still the development of chronic heart failure. Thus, an increased level of BNP indicates the presence of latent heart failure. The results obtained indicate that the use of the BNP laboratory criterion allows for an objective diagnosis with high sensitivity and specificity of the development of CHF. Currently The determination of BNP serves as a prognostic marker and indicator of the effectiveness of treatment and is a standard method for the diagnosis of HF.

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