Academicia Globe:
Inderscience Research

ISSN: 2776-1010 Volume 2, Issue 5, May, 2021

OBSERVATIONS, CLINICAL FEATURES OF ALBUMINURIA WITH RENAL CHANGES IN CHRONIC HEART FAILURE

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Annotation
The article analyzes the causes of complications of age, FC, comorbidities, based on the number of cases of albuminuria among patients with chronic heart failure living in Uzbekistan.

Keywords: chronic heart failure, renal disease, albuminuria, creatinine, comorbidities.

Introduction

Despite the positive advances in the treatment of cardiovascular disease, the number of patients with complications associated with that diseases, including chronic heart failure (CHF), is increasing. Around the worldwide 23 million people are diagnosed with CHF, and 1.0-2.6% of the population in European countries are diagnosed with this serious complication. In the U.S.A, 5.7 million people over of 20 years oldare diagnosed with CHF, with a share of 2.2%. In the Russian Federation, the disease occurs 7% of the population, and about 70% of those over of 90 years old. Also, the share of this serious complication is growing due to the increase in life expectancyin the Republic of Uzbekistan. CHF is not only a major cause of re-hospitalization, but also it is a main cause of death from cardiovascular disease. Mortality from that disease is 4.0-10.3 times higher in the general population as age-appropriate, and in a number of oncological diseases it reaches the level of this unfortunate condition, and even increases. The 5-year survival rate of patients after the diagnosis of CHFwas recorded in 60-70% of cases in the 90s, while in recent years this figure has decreased by 50% with the introduction of modern treatments. A number of researchers have noted that progressive renal dysfunction is a severe complication that is common in many cases. A number of observations have shown that exacerbated renal dysfunction is a common complication in SUE.

According to the results of numerous prospective studies in a large group of patients with functional class II-IV (FS) on CHF NYHA, and a number of other scientists, clinically pronounced renal dysfunction is a very serious adverse factor, leading to rapidly developing cardiovascular damage and general including a sharply increases in mortality from cardiovascular disease.

Purpose of the Study

The research analyzes the causes of complications according to age, FC, comorbidities of the disease, based on the number of occurrences of albuminuria among patients with chronic heart failure. Of the 320 patients with CHF, 148 were men (46.25%) and 172 were women (53.75%)in our exploration.

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Results

It is known that the relationship between microalbuminuria or overnight-daytime proteinuria and what underlies the correlation between the course of cardiovascular disease and the increase in mortality in them has not been fully explored.In addition, there are number of facts that the observation of albuminuria in patients with CHF is one of the leading risk factors for death, with a sharp negative impact on the course of the disease. Some scientific observations confirm that microalbuminuria (proteinuria) is an early and sensitive marker of CHF than blood creatinine levels in damaging of kidney. Therefore, we analyzed the age, FC, comorbidities of the disease, the causes of complications, based on the number of cases of albuminuria among 320 patients with CHF in our observation. Of these, 148 were men (46.25%) and 172 were women (53.75%).

In that, albuminuria was detected in 24.8% of patients under 60 years of age, and in 35.1% of older than 60 patients it was reported (P<0.01). When microalbuminuria tests are performed in cases where albuminuria is not detected, the number of protein detected in the urine is significantly higher among patients with CHF. So, it confirms that renal dysfunction is increasing among patients with CHF as they age.

Analysis of results

The number of albuminuria-detected patients was studieddue toCHF FC in 320 patients in the follow-up. The age of I-FC patients was 54.8 ± 9.3, II-FC 54.4 ± 10.3 and III-FC 64.5 ± 9.9. The examination plan included:

1)Patient complaints, anamnesis, objective examination;

2)Accepted clinical-laboratory, instrumental and special biochemical examinations, electrocardiography (ECG), ExoKG;

3)Microalbuminuria and overnight-daytime proteinuria in urine;

4)Determining endurance to physical exertion is a six-minute walking test.

Analyzes confirmed the being of albuminuria in 15.1% (29) cases of I-FC, 35.6% (68) of II-FC, and 49.3% (94) of III-FC patients (Picture 1).

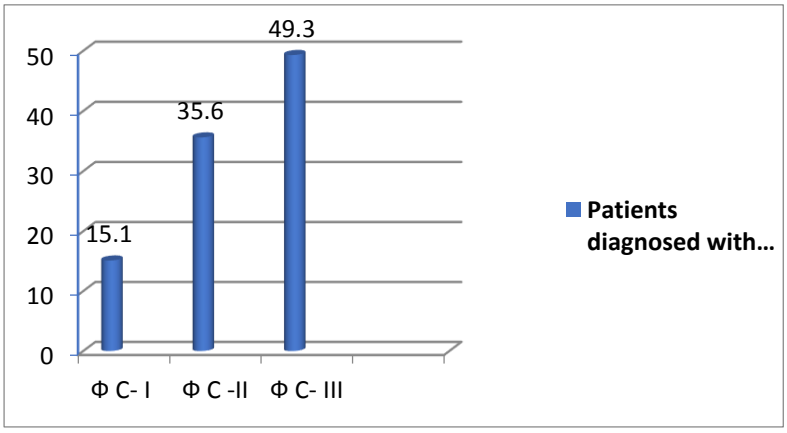

Figure 1 Indicators for albuminuria in different functional classes of chronic heart failure.

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Inderscience Research

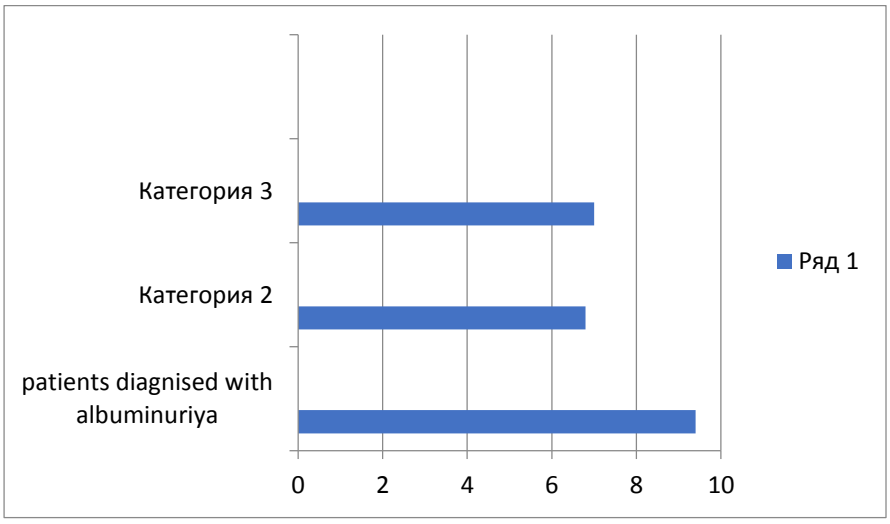
ISSN: 2776-1010 Volume 2, Issue 5, May, 2021

CHF showed that in existing patients, the number of albuminuria increases in parallel as FC worsens. Patients with CHFwere also divided into two groups with anemia and those with normal hemoglobin, and the number of those diagnosed with albuminuria was studied. Their mean ages were 65.64 ± 10.13 and 57.9 ± 9.1, respectively. Hemoglobin levels in the blood were 112.4 ± 10.2 and 134.9 ± 8.9 g / l (P> 0.01). In that, proteinuria was detected in 35.6% of the anemic group and 24.3% of the normal hemoglobin level group. Analyzes confirm that the number of patients diagnosed with albuminuria increases respectively with age, the presence of comorbidities, the severity of the disease FC, the number of patients with CHF. This case requires the study of the level of albuminuria in combination with other pathogenetic mechanisms that aggravate the course of CHF. The study of the effect of albuminuria levels on patients' quality of life and clinical condition is also of some practical importance. There are informations in the available literatures on an increase in deaths from cardiovascular disease as albuminuria increases. With this in mind, we studied the extent to which the quality of life and clinical status scores of the patients in the follow-up were consistent with albuminuria. Information on them is given in Table 1 and Figure 1.

Table 1 Determining the incidence of albuminuria in chronic heart failure using the Minnesota questionnaire .The level of quality of life score (n = 191).

№	Patients diagnosed with albuminuria	Determined points	Intergroup differences
1	I ФС –(n=29)	30,2 ± 1,6	P 1-2 <0,01 P 1-3< 0,001
2	II ФС – (n=68)	49,3 ± 2,9	P 2-1 <0,01 P 2-3 < 0,001
3	III ФС – (n=94)	79 ± 17,8	P 3-1 < 0,001 P 3-2 < 0,001

Score index of clinical status in patients with albuminuria in chronic heart failure (n = 191).



ISSN: 2776-1010 Volume 2, Issue 5, May, 2021

The indicators in Table 1 and Figure 1 show that the level of albuminuria has a very negative impact on the quality of life and clinical condition of patients. At the same time, the quality of life in group 3 albuminuria was almost 2.5 times higher than in group 3, that was 12.3%.(P <0.001) Similar changes were observed in the assessment of the clinical condition (7.0 ± 0.5 and 9.4 ± 3.4 points, respectively.(P<0.05). As noted in a number of literatures, renal dysfunction is one of the major life-threatening factors in patients with CHF.

Conclusions

Based on the number of cases of albuminuria among patients with chronic heart failure, age, FC of the disease, comorbid conditions were analyzed for the causes of complications. The analysis confirms that the number of patients diagnosed with albuminuria increases in proportion to the age of the patients with CHF, the presence of comorbidities, the severity of the disease FC. This case requires the study of the level of albuminuria in combination with other pathogenetic mechanisms that aggravate the course of CHF.

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ISSN: 2776-1010 Volume 2, Issue 5, May, 2021

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