

PREVALENCE AND TREATMENT OF HF IN PATIENTS OLDER THAN 65 YEARS IN ZORILOR NEIGHBORHOOD, CLUJ-NAPOCA

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Abstract: The elderly have an increased risk of developing heart failure (HF). Guidelines adherence is reduced in all physicians. The purpose of this study was to investigate the prevalence of HF in patients over the age of 65, in Zorilor neighborhood, Cluj-Napoca, Romania and to analyze the current trends in the use of evidence-based therapy by the primary care physicians. **Methods:** There were studied 515 subjects, aged 73, 41±6, 43 years. 10.5% of subjects were diagnosed with HF. The prevalence is increasing with age: 16.16% in patients aged 65-70 years, 22.22% in patients aged 71-75 and 61.11% in patients over the age of 75. The treatment prescribed for HF was as follows: ACEIs -66.66%, ARBs-1.85%; loop diuretics and antialdosteronics-83.33%, nitrates-22.22%, beta-blockers-48.14%, and digoxin-35.18%. **Conclusion:** The treatment recommended by guidelines for HF is underutilized in the elderly. New strategies are necessary increase the number of patients that benefit of the effective therapies.

Cuvinte cheie: insuficiența cardiacă, tratament, vârstnici

Rezumat: Vârstnicii prezintă un risc mai crescut de a dezvolta insuficiență cardiacă (IC). Aderența la ghiduri este redusă la toate categoriile de medici. În acest studiu ne-am propus să analizăm prevalența și măsurile terapeutice aplicate, la un lot de pacienți cu IC din cartierul Zorilor, Cluj-Napoca. **Material și metodă:** S-au luat în studiu 515 subiecți, cu vârsta medie de 73,41±6,43 ani dintre care doar 10.5% au prezentat IC, prevalența acesteia crescând odată cu vârsta: 16.16% la pacienții cu vârste de 65-70 de ani, 22.22% pentru grupul 71-75 ani și 61.11% în cazul bolnavilor de peste 75 de ani. **Medicația pentru IC a fost prescrisă astfel:** IECA-66.66%, sartani-1.85%; diuretice de ansă și antialdosteronice-83.33%, nitrați-22.22%, beta-blocante-48.14%, respectiv cardiotonice-digoxin-35.18%. **Concluzie:** Medicația recomandată de ghiduri pentru tratamentul IC la vârstnici este subutilizată. Este necesară elaborarea de strategii noi care să determine creșterea proporției pacienților la care să se recomande un tratament optimal.

INTRODUCTION

In terms of incidence, prevalence, morbidity, and mortality, the epidemiologic magnitude of HF (HF) is staggering. It is the only cardiovascular disease that is increasing in incidence and prevalence, estimating that a pandemic will soon occur. In European Union nearly 15 million people are suffering from HF. The prevalence is 2-3 % (1, 2).

HF is most frequently diagnosed in elderly. Both prevalence and incidence of HF increase steeply with increasing age, subjects over the age of 75, having an increased risk of developing this disease (prevalence of 10-20%) (2, 3).

HF represents a growing public health problem, causing a significant decrease in the quality of life of the patients that need frequent hospitalizations, and escalating health-care costs (2, 4). HF constitutes a serious burden on both public and private systems of financing health care. The costs for the management of HF have been calculated to be approximately 2% of the total health care budget in United States of America, and also in European Union, these costs continuously increasing due to the aging of the population (2,5). HF is considered the most expensive cardiovascular disease in the world, and also in Romania.

Recent trials have now shown that treatment with inhibitors of the neurohormonal systems, such as beta-blockers,

aldosterone antagonists and angiotensin receptor blockers also leads to substantial improvements in outcome, decreasing hospitalization rates and mortality, but they are underused in clinical practice (6,7,8).

In Europe, only 32% of the physicians use the diagnosis and treatment guidelines to help them in the management of HF. In Romania, this number is significantly decreased (9), considering that our country occupies the 3rd place in the world in terms of cardiovascular mortality in women, and the 4th place in men (10).

OBJECTIVES

The purpose of this study was to investigate the prevalence of HF in patients over 65 years of age, in Zorilor neighborhood, Cluj-Napoca, Romania and also to analyze the current trends in the use of evidence-based therapy by the primary care physicians.

MATERIAL AND METHODS

There were studied 515 subjects, over 65 years of age, 264 (51.3%) women and 251 (48.7%) males aged 73,41±6,43 years. We analyzed, in all patients the cardiovascular risk factors: smoking, obesity, hypertension, diabetes mellitus, dyslipidemia. We determined, by using the usual biochemical

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methods, the following: glycemia (normal value <110 mg%), total cholesterol (normal value <200 mg%), HDL-Co (normal value >40 mg% in males, and >45 mg% in females), LDL-Co (normal value <130 mg%), TG (normal value <150 mg%). We also considered the blood pressure (normal value <140/90mmHg) and weight.

For statistical analysis, for the quantitative variables, we determined the average and standard deviation and for qualitative variables we used χ^2 test. A p value less than 0.05 was considered significant from statistical point of view.

RESULTS

The main characteristics of patients included in the study were as shown in Table 1.

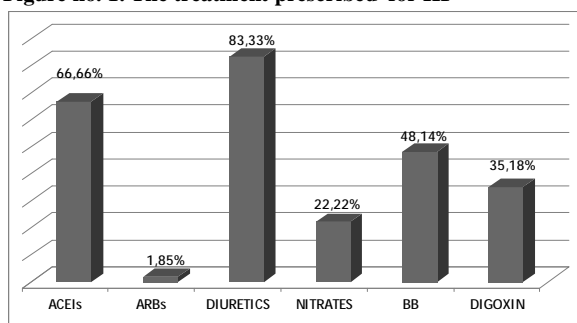
Table no. 1. The main characteristics of patients included in the study

	Number of Patients	Women	Men	p
Gender	515	264 (51,3%)	251 (48,7%)	
Age (years)	73,41±6,43	73,73±6,13	73,08±6,74	NS
Smoking	37 (12,3%)	12 (7,4%)	25 (18%)	<0.004
Obesity gr.I	87 (18,4%)	49 (20,3%)	38 (16,5%)	NS
gr.II	29 (6,1%)	20 (8,3%)	9 (3,9%)	NS
gr.III	2 (0,4%)	2 (0,8%)	0	NS
HTN	454 (88,2%)	241 (91,3%)	213 (84,9%)	0.02
Diabetes mellitus	98 (19%)	56 (21,2%)	42 (16,7%)	NS
Dyslipidemia	209 (40,6%)	128 (48,5%)	81 (32,3%)	<0.001
Stable angina	88 (17,1%)	56 (21,2%)	32 (12,7%)	0.01
Myocardial infarction	45 (8,7%)	15 (5,7%)	30 (12%)	0.012
Silent ischemia	20 (3,9%)	12 (4,5%)	8 (3,2%)	NS
Arrhythmia	119 (23,1%)	62 (23,5%)	57 (22,7%)	NS
HF	54 (10,5%)	26 (9,8%)	28 (11,2%)	NS

The average age for HF patients included in the study was 77±9 years. As it shows in the table, HF was present in only 10.5% of the patients: 9.8% women and 11.2% males, the difference not being statistically significant. The prevalence of HF is increasing with age: 16.16% in patients aged 65-70 years, 22.22% in patients aged 71-75 and 61.11% in patients over the age of 75.

When considering the cardiovascular risk factors in our subjects HTN was present in 88.2% of the patients, followed by dyslipidaemia-40.6%, obesity-20.4%, diabetes mellitus-19%, and smoking in 12.3%.

Figure no. 1. The treatment prescribed for HF



The etiology of HF was represented by ischemic heart disease in all women, and in 96.42% of men.

57% of men were also diagnosed with ventricular arrhythmias, and 46.92% with atrial fibrillation.

The treatment prescribed for HF was as presented in chart 1: ACEIs -66.66%, ARBs-1.85%; loop diuretics and antialdosteronics-83.33%, nitrates-22.22%, beta-blockers-48.14%, and cardiotonics (digoxin)-35.18%

DISCUSSION

The majority of clinical trials included younger patients with an average age of 61 years, 70% of these being males (2, 11). Half of the patients included in the studies were over the age of 75, and males were predominant in younger groups (2,5,11,12). In our study, the average age was 77±6years. In elderly patients, HF frequently remains undiagnosed, mostly because the symptoms, especially those in relationship with exercise are interpreted as a consequence of getting old, or associated to different comorbidities (renal failure, diabetes, stroke, cognitive dysfunction and COPD) (13, 14, 15). In our study the percent of patients diagnosed with HF was also low-10.5%.

HF has a similar prevalence in males and females, and is increasing with age. With all these, women are diagnosed later than men, usually over the age of 75. In our study, we found no difference between the prevalence of HF in both sexes. We also demonstrated that the prevalence of HF increases with age.

The most frequent etiologies for HF are, in both sexes, hypertension and ischemic heart disease, but women with hypertension have an increased risk of developing HF than men (2, 5). In this study, the ischemic etiology was the dominant one.

In elderly patients, HF treatment is not significantly different from that in younger people, but we have to consider some particularities: increased number of comorbidities (hypertension, renal failure, COPD, diabetes mellitus, stroke and anemia), concomitant drug treatment, altered pharmacokinetic processes, diet changes, decreased caloric and proteic intake, decreased compliance. These patients must be carefully monitored clinically and also biologically (2, 14, 15).

The SHAPE study (Study on HF Awareness and Perception in Europe), was conceived in 2002 by an independent group of specialists. In this study were randomly included 2041 cardiologists, 1881 internists and geriatricians, 2965 primary care doctors in France, Germany, Italy, Netherlands, Poland, Romania, Spain, Sweden and Great Britain. Guidelines adherence is decreased in all categories of physicians. This study demonstrates that ACEIs are recommended less frequently by primary care physicians. Only 47% of family practice doctors currently prescribe ACEIs (9, 11). Euro HF Survey was carried out between the years 2000-2001, in 115 tertiary care hospitals in 24 countries. ACEIs were recommended for 61.8% of the patients (16). In 2005, the IMPACT RECO study, included 519 French cardiologists, and demonstrated a prescription rate of 71% for ACEIs (17). To this point, there are few trials in elderly patients that study the effects of ACEIs and ARBs in HF on this category of patients. RAAS antagonists are underused in elderly (40-60%), even if it was proven that they increase survival (17, 18). Regarding the ACEIs- ARBs combination, it is recommended only in patients with persistent symptoms, despite an optimal therapy. In this case, it is very important to carefully monitor potassium levels, renal function, and blood pressure (2). In our study, ACEIs were prescribed to 66.66% of the patients, and only one patient was treated with ARBs. We found no recommendation for using the combined therapy.

Large trials with nebivolol and carvedilol proved that betablockers increase survival in elderly patients with HF (19,

20, 21, 22, 23). Betablockers should be initiated in small doses, and gradually increased, carefully monitoring BP, heart rate, and the general status of the patients. Only 5% of primary care physicians always prescribe a beta blocker, 39% occasionally, and target doses are prescribed only to 7-29% of patients. 26% of primary care doctors (in comparison to 11%), do not start beta blocker therapy in HF patients already treated with ACEIs and diuretics (24, 25, 26, 27, 28, 29). In the present study, beta blockers were prescribed to 48.14% of the patients, less than IMPACT RECO study (65%), but more than in Euro HF Survey (36.8%) (16, 17).

In patients with mild hemodynamically stable HF, 39% of family physicians only recommend diuretics. There are only few small studies with spironolactone that included elderly patients, in which there was noticed an increase in survival (29). Loop diuretics and aldosterone antagonists were used in 83.33% of the patients included in the present study, the results being comparable with those obtained in Euro HF Survey, where 86.9% of the patients received diuretics and 20.5% spironolactone (16). In IMPACT RECO study aldosterone antagonists were recommended for 43.5% of the patients (17).

When prescribing digoxin, physicians must remember that an increase in digoxin plasmatic level is associated with an increase in mortality, especially in elderly patients with HF, as mentioned by DIG, and also other trials (31, 32). A subgroup analysis of DIG trial demonstrated an increase in mortality in old women treated with digoxin (32). It is very well known that old patients have an altered renal function, being necessary, once more, to monitor the plasmatic level of digoxin. Digoxin should be recommended in all HF patients with persistent congestive symptoms, optimally treated with diuretics, ACEIs, ARBs and beta blockers (33). In our study a small percent of patients was treated with digoxin- 35.8%

CONCLUSIONS

The treatment recommended by guidelines for elderly HF patients, is underused in clinical practice. Strategies are necessary to improve guidelines adherence, both in physicians and also in patients.

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