

Contributing factors in heart failure development—results from CRO-HF Registry

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Introduction: There are many causes of heart failure (HF), and these vary in different populations. The aim of the study was to analyse the contributing factors in heart failure development.

Methods: We analyzed the results from CRO-HF Registry^{1,2}. This on-line registry was established in 2005.

Results: A total of 2203 in-hospital HF patients from CRO-HF Registry were analyzed: 1,028 (46.7%) females (F) and 1,175 (53.3%) males (M); median age was 76 years. Preserved left ventricular systolic function (LVEF 50%) was recorded in 37.8% patients.

History of arterial hypertension was recorded in 67.5% patients, diabetes mellitus in 34.4%, myocardial infarction in 22.7%, renal insufficiency in 19.2%, chronic obstructive pulmonary disease (COPD) in 17.3%, and cerebrovascular disease in 16.5% patients. Atrial fibrillation or undulation was noted in 53.7% patients. Active smoking habit was recorded in 11.1% patients and 15.6% patients were former smokers.

Overweight was recorded in 46.3% patients and obesity in 25%.

The frequent precipitating factors of HF were arterial hypertension (55.5% patients), arrhythmias (51.3%), valvular heart disease (32.8%), acute coronary syndrome (19.7%), and infections (19.6%).

Lower levels of haemoglobin was recorded in 51.9% patients, higher levels of creatinine in 46.8%, ALT in 29.8%, cholesterol in 32.7%, tryglicerides in 31.9%, uric acid in 79.3% and hyperglycaemia in 99.8% patients. Females had higher values of ALT (F-33%, M-27%, P=0.012), cholesterol (F-36.8%, M-29.1%, P=0.009), tryglicerides (F-36.1%, M-28.3%, P=0.014), and uric acid (F-82.9%, M-76.4%, P=0.007). Opposite to expectation, males had lower haemoglobin levels (M-58%, F-44.8%, P 0.001).

In-hospital mortality rate was 13.8%.

Conclusion: The considerable underlying diseases of HF were hypertension, diabetes mellitus, myocardial infarction, renal insufficiency and COPD. one-third of HF patients were smokers (active or former) and two-third of them were overweight or obese. Hypertension was the most important “trigger” of our HF patients, close to arrhythmia, ACS, and infections.

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