HIGH FUROSEMIDE DOESES INCREASE MORTALITY AND MORBIDITY IN STABLE CHRONIC HEART FAILURE: A PROSPECTIVE, RANDOMIZED STUDY

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Background: High doses of diuretics have been associated with increased mortality in chronic heart failure (HF). It remains unclear whether the administered dose represents a marker of clinical severity or if diuretics exert a deleterious effect. No evidence-based recommendations regarding their optimal use are available. We investigated the feasibility of reducing high furosemide doses (previously required for achievement of euvoelema) in clinically stable HF patients and the impact of this intervention on outcome.

Methods: Patients with stable chronic HF (no HF-related hospitalization, no change in NYHA class or furosemide dose during the last 3 months) receiving a per os furosemide dose >120 mg daily were included in the study. Patients were randomized in a 1:1 manner to either maintenance of daily furosemide dose (group A) or to reduction to one third (group B).

Results: Forty patients (mean age, NYHA class, left ventricular ejection fraction and daily furosemide dose were 62.4±13.9 years, 1.93±0.56, 28.2±6.7% and 215±111mg) were included in the study. The two groups did not differ in baseline characteristics. In group A, no significant changes in body weight and NYHA class between baseline and follow-up were observed, while plasma hemoglobin significantly decreased and serum creatinine increased (13.4 ± 1.5 to 12.9 ± 1.4gr/dL, p=0.036 and 1.25 ± 0.37 to 1.60 ± 0.73mg/dl, p=0.042). In group B, although furosemide dose was reduced to one third and maintained reduced during follow-up (from 75.6±37.0 to 74.1±40.9mg, p=0.84), body weight and NYHA class were not affected (from 89.8±24.5 to 89.8±26.7 kilograms, p=0.97 and from 1.91±0.52 to 1.84±0.47, p=0.58). No significant changes were observed in hematology and biochemistry values. 40% of patients in group A died or were hospitalized for any cause during follow-up versus 15% of patients in group B (p=0.072). The rate of survival free of death or HF hospitalization was 75% in group A versus 100% in group B (log rank test=0.012).

Conclusions: Reduction of furosemide dose in stable patients with chronic HF is feasible and is not accompanied by deterioration of clinical status. Moreover, it seems to be associated with a more favorable prognosis.