**GROUPING OF PATIENTS ON RELATION TO HOSPITAL READMISSION BY ACUTE HEART FAILURE**

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*Objectives:* The goal of this study was to identify profiles of patients hospitalized by acute heart failure (AHF) on relation to readmissions up to one year after hospital discharge. Background: Patients readmission is considered an important quality of care problem.

*Methods*: Observational prospective cohort study of 6 hospitals. 448 patients diagnosed with AHF who came to the emergency services of these centers were included. Various parameters were collected on the emergency room, during admission and until discharge. Multiple correspondence analysis (MCA) and cluster analysis (CA) were performed to define types of patients.

Results: The two factors derived from the MCA (explained 82% of the total variability) were associated with patient’s severity and comorbidities, respectively. Three group of patients were identified (A, B, C) and we found statistically significant differences among them according to active variables: 96.58% of type A went to the emergency services because of decompensated chronic heart failure, 71.79% had antecedents of coronary disease and 73.50% has previous admissions. Type B included patients with new diagnosis of HF (83.06%), and is the second group with the highest number of comorbidities as COPD, diabetes or antecedents of coronary disease (p<0.0001). 11.49% of patients of type C had new diagnosis of AHF, and was the group with the highest percentage of anaemia and pulmonary hypertension (p<0.0001. Additionally, patients who were not readmitted throughout the follow up were associated with type B, while patients who were just readmitted before 30 days were associated with type C. However, patients who were readmitted before 30 days or before one year were associated with patients of type A. *Conclusions*: This statistical technique create clear and different patient profiles related to the moment of readmission which may help to identify and establish different preventive or corrective measures during hospital admission to reduce readmissions.