Heart failure clinic in pediatric population: a comparative analysis of outcome

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Objectives
It has been reported that heart failure clinic (HFC) can improve the outcome of adult patients affected by heart failure, in terms of reduction of rehospitalisation, adherence to therapy and improvement of quality of life. No data are currently available on paediatric population. The aim of current study was to determine whether a specific HFC program is effective also in paediatric field

Methods: Since 2013, a specific HFC program has been developed. Children are referred to HFC in case of: 1) left ventricular dysfunction with EF < 45% due to dilated cardiomyopathy or after surgery, 2) restrictive and 3) hypertrophic cardiomyopathy 4) Fontan failure 5) pulmonary hypertension . To evaluate the impact on mortality, rehospitalisation, analysis of comorbidities and compliance to therapy, we made a comparative analysis on 291 children followed between 2011 and 2015, before and after the specific program. A multidisciplinary approach and specific disease protocols have been applied. HFC included two cardiologists and 1 nurse dedicated.

Results: The characteristic of our population (11.2+ 5 yrs old; 52% male) are: 45% affected by cardiomyopathies, 50% CHD with ventricular dysfunction or Fontan failure, 12% pulmonary hypertension. After the introduction of this program, a significant reduction of rehospitalization was observed in particular for emergency reasons (2012 vs 2014 75% vs 33%, p< 0.001; 2012 vs 2015 75 vs 12% , p< 0.001 ) and for acute HF ( 2012 vs 2014 52% vs 13 %, p < 0.001). No differences in terms of mortality has been observed. Major reasons for rehospitalisation were: respiratory infection (52%), gastroenterological infection (33%), arrhythmias (12%). Major comorbidities included: nutritional aspects, respiratory disease and orthopaedic problems. 45% of patients had more than two comorbidities.

Conclusions: In our center, HFC program allowed to reduce rehospitalisation but not mortality. Multidisciplinary approach is required to manage this complex group of patients.