Abstract: P434

Changes in respiratory pulmonary function in patients with advanced heart failure listed for heart transplantation.

Authors:
B Keller¹, JM Dominguez¹, S Vazquez¹, G Spitaleri¹, M Farrero¹, F Perez-Villa¹, M A Castel Lavilla¹, ¹Hospital Clinic de Barcelona, Cardiology Department - Barcelona - Spain,

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Introduction and Objectives: Respiratory function is commonly affected in advanced heart failure (HF) patients waiting for Heart Transplantation (HT). They frequently have a resting restrictive ventilatory defect caused by their cardiomyopathy with a reduction of total pulmonary volumes and diffusion capacity for carbon monoxide (DLco). Moreover, an obstructive pattern may also be present in many patients and its relation to mortality is not well defined. The aim of this study was to evaluate the prevalence and type of respiratory functional patterns in advanced HF patients and how it affects their outcomes after HT.

Methods: We evaluated retrospectively all consecutive patients listed for HT in one single centre from 2014 to 2018. Patients were classified in three groups depending on their functional pulmonary test: a) Normal pattern if force vital capacity (FVC) = 80% and forced expiratory volume in 1 second (FEV1)/FVC = 70%; b) Restrictive pattern if FEV1/FVC = 70% and FVC < 80%; and c) Obstructive pattern if FEV1/FVC < 70%. We also evaluated if DLco were diminished (DLco < 80%) and the presence of an altered FEV1 (<70%). Patients listed for urgent HT or from other centres without a complete pulmonary function test were excluded from analysis.

Results: From a total of 77 patients, 48 patients were included in the study. They were 73% male, mean age 57± 10 y (18-70), IMC 25 ± 4 kg/m2, 6.3% active smokers, 25% former smokers. 47.9% showed an obstructive pattern, 41.7% a restrictive pattern and 10.4% a normal pattern. 77.8% of them had an altered DLco and 54.2% an altered FEV1. Kaplan Meier analysis showed a higher mortality after HT for patients with FEV1<70% compared to other groups (p=0.01)

Conclusions: Patients with advanced heart failure show a high prevalence of altered respiratory functional patterns. Patients with a low FEV1 had a higher mortality after HT.