358 Clinical characteristic and natural history of chemotherapy induced dilated cardiomyopathy

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Chemotherapy can lead to chemotherapy-induced dilated cardiomyopathy (CI-DCM), recognized as one of the Non-ischaemic Dilated Cardiomyopathy (DCM) phenotypes characterized by worse outcome. Evidences on a direct comparison between idiopathic-DCM (iDCM) and CI-DCM still lack. We included all the consecutive patients enrolled in the Trieste Muscle Heart Disease Registry. C-DCM was defined according to current recommendations. Uni- and multivariable analysis and Kaplan-Meier were performed. The primary outcome was all-cause death and the secondary outcomes were cardiac death and a composite of heart failure hospitalization, heart transplantation, ventricular assist-device implantation and major ventricular arrhythmias. The study included 511 patients (499 patients affected by iDCM and 52 patients affected by CI-DCM). Compared to iDCM, CI-DCM patients were older (51 ± 14 years vs. 58 ± 3 years respectively, $P < 0.001$) and had a higher LVEF (35%±10 vs. 32%±9, $P = 0.03$). CI-DCM patients had a higher incidence of all-cause of death compared to iDCM (36.5% vs. 8.4%, $P < 0.001$), while the incidence of cardiac death (7% in the CI-DCM group vs. 4% in the iDCM group, $P = 0.232$) and of the composite secondary outcome was comparable amongst the two groups. At multivariable analysis, the diagnosis of CI-DCM was an independent predictor of primary outcome incidence (HR: 5.79, 95% CI: 1.83–18.27), $P = 0.003$, together atrial fibrillation. In a well-selected DCM cohort, patients with a chemotherapic etiology had a higher incidence of all-cause mortality compared to iDCM, while the incidence of cardiac adverse events was comparable among CI-DCM and iDCM.