Does aetiology of dilated cardiomyopathy impact the outcome in Eastern Europe?

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Funding Acknowledgements: Type of funding sources: Public Institution(s). Main funding source(s): The Department of Scientific Research and Structural Funds of Medical College, Jagiellonian University

Introduction: There are regional variations (West vs. East vs. North vs. South) in aetiology and outcomes in patients with cardiomyopathies according to EORP Registry. However, those preliminary observations have not been systematically verified. Here we report on the large cohort of dilated cardiomyopathy (DCM) patients managed in a tertiary centre in Eastern Europe.

Purpose: Analysis of all-cause mortality in DCM patients with different aetiology.

Methods: 500 DCM patients (aged 53.1±13.6 years, 81% male, LVEF 26.6±10.4%, LVEDd 65.9±10.3mm, symptoms duration 38.6±61.2 months) from 2010-2021 with complete baseline and follow-up data were included retrospectively. DCM aetiology was diagnosed according to medical documentation as: idiopathic, inflammatory, toxic: alcohol-induced or other (including chemotherapy and drug-induced), arrhythmic and familial or genetic (ref genetic). After mean follow-up (FU) of 45.6±31.0 months, the all-cause mortality and composite endpoint (all-cause mortality, heart transplant – HTX, left ventricle assist device implantation - LVAD) were assessed.

Results: Out of 500 DCM patients no clear aetiology was found in 41% of patients (idiopathic DCM). The most common was inflammatory DCM, followed by alcohol-induced, arrhythmic, and genetic DCM (Figure 1-A). The least common was toxic DCM (18 - after chemotherapy, 2 – drug-induced).

During FU there were 97 (19%) patients with the following events: 88 (18%) patients died, 7 (1%) had LVAD and 15 (3%) had HTX (Figure 1-B). Statistically, all groups did not differ in terms of events (all p>0.05), however on the Kaplan-Meier plot patients with toxic DCM (chemotherapy or drug-induced) had the worst outcome while patients with inflammatory DCM had the best outcome during 6-years FU (Figure 1-C, 1-D).

Conclusion: More than one-third of DCM patients were diagnosed with idiopathic DCM. Toxic DCM was the second most prevalent aetiology and was diagnosed in nearly a quarter of patients. Alcohol-induced DCM was present in every fifth of patients. Although statistically no difference in outcome was found, according to Kaplan-Meier curves, patients with inflammatory DCM have the best prognosis and those with chemotherapy- or drug-induced – the worst.

Figure 1.