Abstract: P5547
First results of Translational Registry for Cardiomyopathies (TORCH)

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Introduction: The cardiomyopathies (CMPs) are a diverse group of cardiac disorders and leading cause of heart failure (HF) and sudden cardiac death (SCD). Clinical courses of CMPs vary considerably even between patients with the same disease entity. The Translational Registry for Cardiomyopathies (TORCH) is a comprehensive CMP registry that aims to provide a database and biomaterial bank for basic science and clinical research in this field. The long-term objective of this registry is to increase the understanding of disease pathomechanisms on the way to a better risk stratification as well as identification of new diagnostic and therapeutic approaches in CMP.

Methods: TORCH is a national, prospective, and multicentre registry within the German Centre for Cardiovascular Research (DZHK), which includes 2300 consecutive patients with non-ischemic (primary and secondary) CMP in 20 centres. The minimum follow up time is one year. The DZHK-wide harmonization of datasets and eCRFs (electronic case report form) were performed to ensure a high level of data quality across different study centres.

Results: Seventy percent of the enrolled patients are male. Idiopathic/familial dilated cardiomyopathy (DCM) holds the highest prevalence with 54%, followed by inflammatory DCM/myocarditis with a prevalence of 24%. Hypertrophic cardiomyopathy (HCM) is the third-most prevalent CMP in this registry (16%). Infrequent CMPs such as left ventricular non-compaction (LVNC), arrhythmogenic right ventricular cardiomyopathies (ARVC) are also represented in TORCH with a prevalence of 4% and 2% respectively. Major clinical findings are registered in TORCH. Atrial fibrillation was present with a high prevalence among all CMPs (22%-35%). The highest prevalence of stroke or TIA at baseline was reported in patients with LVNC (15.1%) and the lowest in those with amyloidosis (3.3%). Patients with ARVC had the highest number of ICD implantation and adequate ICD therapy (56.7%, p<0.05; 47.1%, p<0.05). Preliminary data analysis showed higher frequency of therapy refractory heart failure symptoms and worse outcome in patients with familial DCM in comparison to those with inflammatory or idiopathic DCM.

Conclusion and outlook: TORCH represents one of the largest cardiomyopathy registries in Europe. The patients are comprehensively phenotyped through clinical examinations, state-of-the-art imaging modalities, as well as molecular, genetic, and epigenetic investigations. This registry can help researchers design further studies investigating new diagnostic tools or therapeutic strategies in CMPs.