

MP1-10

Update on baseline data and first 1-year follow-up from the German multi-centre myocarditis registry in pediatric patients: "MYKKE".

Degener, F. (1,2,3), Opgen-Rhein B.(2), Schmidt F.(4), Weigelt A.(5), Wagner R.(6), Müller G.(7), Rentzsch A.(8), Racolta A.(9), Papakostas K.(10), Wiegand G.(11), Ruf B.(12), Hannes T.(13), Reineker K.(14), Kiski D.(15), Khalil M.(16), Fischer M.(17), Steinmetz M.(18), Fischer G.(19), Pickardt T.(20), Messroghli D.(1,21,3), Schubert S.(1,3) on behalf of the MYKKE consortium

Deutsches Herzzentrum Berlin, Klinik für Angeborene Herzfehler/Kinderkardiologie, Berlin, Germany (1); Charité Universitätsmedizin Berlin, Klinik für Pädiatrie mit Schwerpunkt Kardiologie, Berlin, Germany (2); DZHK (German Centre for Cardiovascular Research) partner site Berlin, Germany (3); Medizinische Hochschule Hannover, Kinderkardiologie, Hannover, Germany (4); Universitätsklinikum Erlangen, Kinderkardiologie, Erlangen, Germany (5); Herzzentrum Leipzig, Kinderkardiologie, Leipzig, Germany (6); Universitäres Herzzentrum Hamburg, Kinderkardiologie, Hamburg, Germany (7); Universitätsklinikum des Saarlandes, Kinderkardiologie, Homburg, Germany (8); Herz- und Diabeteszentrum NRW, Zentrum für angeborene Herzfehler, Bad Oeynhausen, Germany (9); Klinikum Links der Weser, Strukturelle und angeborene Herzfehler / Kinderkardiologie, Bremen, Germany (10); Universitätsklinikum Tübingen, Klinik für Kinder- und Jugendmedizin, Kinderkardiologie, Tübingen, Germany (11); Deutsches Herzzentrum München, Technische Universität München, Angeborene Herzfehler/Kinderkardiologie, München, Germany(12); Uniklinik Köln, Kinderkardiologie, Köln, Germany (13); Universitäts-Herzzentrum Freiburg Bad Krozingen, Klinik für angeborene Herzfehler und Pädiatrische Kardiologie, Freiburg, Germany (14); Universitätsklinikum Münster, Klinik für Kinder- und Jugendmedizin/Pädiatrische Kardiologie, Münster, Germany (15); Universitätsklinik Gießen, Abteilung für Kinderkardiologie, Giessen, Germany (16); LMU, Abteilung Kinderkardiologie und Pädiatrische Intensivmedizin, München, Germany (17); Universitätsmedizin Göttingen, Kinderherzkl. Göttingen, Klinik für Pädiatrische Kardiologie und Intensivmedizin, Göttingen, Germany (18); Universitätsklinikum Schleswig-Holstein, Klinik für angeborene Herzfehler und Kinderkardiologie, Kiel, Germany (19); Kompetenznetz für angeborene Herzfehler, Berlin, Germany (20); Deutsches Herzzentrum Berlin, Klinik für Innere Medizin - Kardiologie, Berlin, Germany (21)

Objectives:

There are only few data on epidemiology, diagnosis and therapy of myocarditis in children and adolescents. Our first data revealed a high incidence of young children with severe heart failure, maybe due to immunological differences. With our new data we confirm the first baseline data on age-related clinical differences in this patient group and show follow up data.

Methods:

After an initial 6-month pilot phase, MYKKE was opened in June 2014 as a prospective multi-centre registry for patients from pediatric heart centers, university hospitals and community hospitals in Germany. Inclusion criteria are age < 18 years, hospitalization for suspected myocarditis and written consent.

Results:

By October 31st 2016, 18 centers across Germany are actively participating and have enrolled 207 patients. Baseline data show clear trends for age: 0-<2 years (24%), 2-12 years (20%) and 13-18 years (56%); gender: male 67%. Decrease of exercise capacity (72%) was the leading symptom, followed by dyspnea (39%), angina (38%), arrhythmia (30%), feeding intolerance (22%) and syncope (13%). Sudden cardiac death was only rare (3%). 56% had an infection less than 6 weeks ago, respectively 35% fever. Patients 0-<2 years had again the highest incidence of reduction of ejection fraction (EF) below 30% (55%) compared with age groups 2-12y (39%) and 13-18y (9%). Furthermore they and the 2-12 year group had the highest need for VAD therapy (20%) according to 53% patients with decompensation (2-12 years: 41%; 13-18 years: 9%). Most children died in the 2-12 years group (10%). The overall mortality was 3.9%. By now we have the follow up data of 38 patients with a median time of 11 month after first visit. The median EF increased significantly from 47% at initial presentation to 60% at follow up (p<0.001).

Conclusions:

With its ongoing enrollment, MYKKE is a successful multi-centre registry for myocarditis in children and adolescents. The data underline two age peaks with a severe clinical course and more adverse events in the youngest patients. MYKKE serves as a platform for deriving diagnostic criteria and will in future facilitate interventional studies.