Inflammatory Cardiomyopathy (DCMi) – Pathogenesis and Therapy

Heinz-Peter Schultheiss
Michel Noutsias

Editors
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List of contributors

Annalisa Angelini, Department of Medico-diagnostic Sciences and Special Therapies, Special Pathological Anatomy, University of Padua Medical School, Via A. Gabelli, 61, 35121 Padova, Italy; e-mail: annalisa.angelini@unipd.it

Christoph Berger, Departments of Internal Medicine and Research, University Hospital, Petersgraben 4, 4031 Basel, Switzerland

Valérie Boivin, Institute of Pharmacology and Toxicology, University of Würzburg, Versbacher Str. 9, 97078 Würzburg, Germany; e-mail: valerie.jahns@toxi.uni-wuerzburg.de

Fiorella Calabrese, Department of Medico-diagnostic Sciences and Special Therapies, Special Pathological Anatomy, University of Padua Medical School, Via A. Gabelli, 61, 35121 Padova, Italy; e-mail: fiorella.calabrese@unipd.it

Cristina Chimenti, Department of Cardiovascular and Respiratory Sciences, La Sapienza University, Viale del Policlinico 155, 00161 Rome, Italy; e-mail: cristinachimenti@libero.it

G. William Dec, Cardiology Division, Massachusetts General Hospital, Heart Failure and Transplantation Unit, Boston, MA 02114, USA; e-mail: gdec@partners.org

Urs Eriksson, GZO AG Spital Wetzikon, Spitalstr. 66, 8620 Wetzikon, Switzerland; and Universitätsspital Zürich, Rämistr. 100, 8091 Zürich, Switzerland; e-mail: urs.eriksson@usz.ch

Georg Ertl, Department of Internal Medicine, Medizinische Klinik und Poliklinik I, Cardiology, University Hospital of Würzburg, Oberdürrbacher Str. 6, 97080 Würzburg, Germany; e-mail: ertl_g@klinik.uni-wuerzburg.de

Stephan B. Felix, Klinik für Innere Medizin B, Ernst-Moritz-Arndt-Universität, Friedrich-Loefflerstr. 23a, 17475 Greifswald, Germany; e-mail: felix@uni-greifswald.de
List of contributors

Andrea Frustaci, Department of Cardiovascular and Respiratory Sciences, La Sapienza University, Viale del Policlinico 155, 00161 Rome, Italy; e-mail: biocard@inmi.it

Matthias Gutberlet, University Leipzig/ Leipzig Heart Center, Department of Diagnostic and Interventional Radiology, Strümpellstrasse 39, 04289 Leipzig, Germany; e-mail: matthias.gutberlet@herzzentrum-leipzig.de

Roland Jahns, Department of Internal Medicine, Medizinische Klinik und Poliklinik I, Cardiology, University Hospital of Würzburg, Oberdürrbacher Str. 6, 97080 Würzburg, and Institute of Pharmacology and Toxicology, University of Würzburg, Versbacher Str. 9, 97078 Würzburg, Germany; e-mail: jahns_r@klinik.uni-wuerzburg.de

Konstantinos Karatolios, Department of Internal Medicine-Cardiology, University Hospital of Giessen and Marburg, Baldingerstrasse 1, 35033 Marburg, Germany; e-mail: karatoli@med.uni-marburg.de

Uwe Kühl, Department of Cardiology and Pneumonology, Charité – Universitätsmedizin Berlin, Campus Benjamin Franklin, Hindenburgdamm 30, 12200 Berlin, Germany; e-mail: uwe.kuehl@charite.de

Peter Liu, Heart & Stroke Medicine and Physiology, Institute of Circulatory and Respiratory Health, Canadian Institutes of Health Research, Toronto General Hospital, University of Toronto, Canada; e-mail: peter.liu@utoronto.ca

Martin J. Lohse, Institute of Pharmacology and Toxicology, University of Würzburg, Versbacher Str. 9, 97078 Würzburg, Germany; e-mail: lohse@toxi.uni-wuerzburg.de

Bernhard Maisch, Department of Internal Medicine – Cardiology, University Hospital of Giessen and Marburg, Philipps-Universität Marburg, Baldingerstrasse 1, 35033 Marburg, Germany; e-mail: maisch@med.uni-marburg.de

Douglas L. Mann, Division of Cardiology, Washington University School of Medicine, St. Louis, MO, USA; e-mail: dmann@dom.wustl.edu

Michel Noutsias, Department of Internal Medicine – Cardiology, University Hospital of Marburg and Giessen, Philipps-Universität Marburg, Baldinger Strasse 1, 35033 Marburg, Germany; e-mail: michel.noutsias@staff.uni-marburg.de

Sabine Pankuweit, Department of Internal Medicine-Cardiology, University Hospital of Giessen and Marburg, Baldingerstrasse 1, 35033 Marburg, Germany; e-mail: pankuwei@staff.uni-marburg.de
Matthias Pauschinger, Department of Cardiology, Medizinische Klinik 8, Klinikum Nürnberg Süd, Breslauer Straße 201, 90471 Nürnberg, Germany; e-mail: matthias.pauschinger@klinikum-nuernberg.de

Arsen Ristic, Department of Cardiology II, Belgrade University, Belgrade, Serbia; e-mail: arsen.ristic@med.bg.ac.yu

Susanne Rutschow, Department of Cardiology and Pneumonology, Charité-Centrum 11 for Cardiovascular Medicine, Charité – Universitätsmedizin Berlin, Campus Benjamin Franklin, Hindenburgdamm 30, 12200 Berlin, Germany; e-mail: susannerutschow@gmx.de

Heinz-Peter Schultheiss, Department of Cardiology and Pneumonology, Charité – Universitätsmedizin Berlin, Campus Benjamin Franklin, Hindenburgdamm 30, 12200 Berlin, Germany; e-mail: heinz-peter.schultheiss@charite.de

Alexander Staudt, Klinik für Innere Medizin B, Ernst-Moritz-Arndt-Universität, Friedrich-Loefflerstr. 23a, 17475 Greifswald, Germany; e-mail: staudt@uni-greifswald.de

Gaetano Thiene, Department of Medico-diagnostic Sciences and Special Therapies, Special Pathological Anatomy, University of Padua Medical School, Via A. Gabelli, 61, 35121 Padova, Italy; e-mail: gaetano.thiene@unipd.it

Jeffrey A. Towbin, The Heart Institute, Division of Pediatric Cardiology, Cincinnati Children’s Hospital Medical Center, 3333 Burnet Avenue, Cincinnati, OH 45229, USA; e-mail: jeffrey.towbin@cchmc.org

Jesus G. Vallejo, Section of Infectious Diseases, Department of Pediatrics and Wint-ers Center for Heart Failure Research, Baylor College of Medicine and Texas Children’s Hospital, 6621 Fannin Street, Houston, TX 77030, USA; e-mail: jvallejo@bcm.tmc.edu

Matteo Vatta, Baylor College of Medicine, Texas Children’s Hospital, 6621 Fannin Street, MC 19345-C, Houston, TX 77030, USA
Acute myocarditis (AMC) and its sequelae, inflammatory cardiomyopathy (DCMi), are leading entities of heart failure and of cardiac transplantation. AMC is mostly caused by various cardiotropic viruses in the Western World. The long-anticipated association of dilated cardiomyopathy with chronic inflammation and viral persistence in terms of DCMi has been substantiated by more sensitive and specific diagnostic methods for analyzing material from endomyocardial biopsies (EMBs) during the last 15 years. This development has led to the broadly acknowledged “death of the Dallas criteria” as the single conditio sine qua non for the histological diagnosis of myocarditis. Moreover, these refined diagnostic techniques have been pertinent for successful randomized immunomodulatory trials. As such, immunosuppression, antiviral interferon treatment and immunoadsorption have shown significant beneficial results in selected DCMi patients. These compelling insights will likely lead to a renunciation of the limited usage of EMBs, seen as a consequence after the first immunosuppressive trial based on the Dallas criteria. In addition, cardiac magnetic resonance (CMR) has evolved to a powerful non-invasive diagnostic approach.

“Cardiac inflammation is difficult to diagnose and, even if diagnosed, can we then treat it more effectively?” This was written 1772 by Jean Baptiste Sénag, physician to Louis XV. Are we yet able to answer this simple, but decisive question? In fact, DCMi is still an enigmatic disease, with highly diverging clinical courses, and potentially fatal outcomes. More robust prognostic variables and selection criteria for appropriate DCMi candidates and the corresponding immunomodulatory treatment strategies are needed. Almost yearly new key players of the immune system and of viral entry/persistence mechanisms are unraveled as relevant pathogenic and therapeutic targets in experimental myocarditis. “It is better to know some of the questions than all of the answers.” (James Thurber; 1894–1961).

This volume focuses on major advances in DCMi over the last 10 years, encompassing:

(1) Epidemiology and prognosis; (2) insights from experimental myocarditis; (3) alterations of the immune system in human DCMi; (4) diagnostic concepts of DCMi
in EMBs and by CMR; and (5) conventional and immunomodulatory treatment strategies in DCMi.

We thank the international group of leading authors who have contributed to this book. This volume serves as a valuable source for cardiologists, cardiovascular pathologists and related researchers to update their knowledge on DCMi. DCMi is specific cardiomyopathy entity, defined in 1996 by the WHO/International Society and Federation of Cardiology Task Force on the Definition and Classification of cardiomyopathies, and since then research into this entity has made major steps from bench to bedside.

January 2010                                      H.-P. Schultheiss
                                                     M. Noutsias
Myocarditis and inflammatory cardiomyopathy – clinical management, epidemiology and prognosis
Inflammatory pericardial syndromes include acute, chronic and recurrent (relapsing) pericarditis, pericardial effusion and cardiac tamponade as well as constrictive pericarditis. Their etiology comprises infectious, systemic autoimmune, metabolic, toxic, neoplastic, postmyocardial infarction syndrome, postcardiotomy syndrome and autoreactive disorders (Tab. 1) [1–4].