



Universiteit
Leiden
The Netherlands

New insights in mechanism, diagnosis and treatment of myocardial infarction

Bergheanu, S.C.

Citation

Bergheanu, S. C. (2011, April 21). *New insights in mechanism, diagnosis and treatment of myocardial infarction*. Retrieved from <https://hdl.handle.net/1887/17588>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/17588>

Note: To cite this publication please use the final published version (if applicable).

**NEW INSIGHTS IN MECHANISM, DIAGNOSIS AND
TREATMENT OF MYOCARDIAL INFARCTION**

Sandrin C. Bergheanu

The studies described in this thesis were performed at the Department of Cardiology of the Leiden University Medical Center, the Netherlands.

ISBN: 978-94-90371-77-7

Layout and printing: Off Page, www.offpage.nl

Copyright © 2011 by Sandrin Cetegus Bergheanu. All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, without prior permission of the author.

NEW INSIGHTS IN MECHANISM, DIAGNOSIS AND TREATMENT OF MYOCARDIAL INFARCTION

PROEFSCHRIFT

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van de Rector Magnificus prof. mr. P.F. van der Heijden,
volgens besluit van het College voor Promoties
te verdedigen op 21 april 2011
klokke 16.15 uur

door

Sandrin Cetegus Bergheanu

geboren te Boekarest, Roemenie
1979

PROMOTIECOMMISSIE

Promoters: Prof. Dr. J.W. Jukema
Prof. Dr. F.R.. Rosendaal

Co-promoter: Dr. J.G. van der Bom

Overige leden: Prof. Dr. R.J. de Winter
Prof. Dr. E.E. van der Wall
Prof. Dr. M.J. Schalij
Dr. P. Oemrawsingh
Prof. Dr. A. van der Laarse
Prof. Dr. L.M. Havekes

Financial support by the Netherlands Heart Foundation for the publication of this thesis is gratefully acknowledged.

In the memory of my father

CONTENTS

CHAPTER 1	General introduction	9
CHAPTER 2	Asymmetric dimethylarginine (ADMA) levels display a morning peak in patients with acute myocardial infarction	25
CHAPTER 3	Myocardial infarction occurs with a similar 24 h pattern in the 4G/5G versions of plasminogen activator inhibitor-1	39
CHAPTER 4	Usefulness of peak troponin-t to predict infarct size and long-term outcome in patients with first acute myocardial infarction after primary percutaneous coronary intervention	57
CHAPTER 5	Late stent malapposition risk is higher after drug-eluting stent compared with bare-metal stent implantation and associates with late stent thrombosis	73
CHAPTER 6	Post-intervention IVUS is not predictive for very late in-stent thrombosis in drug-eluting stents	93
CHAPTER 7	Impact of sirolimus-eluting stent implantation compared to bare-metal stent implantation for acute myocardial infarction on coronary plaque composition at 9 months follow up: a Virtual Histology intravascular ultrasound analysis. Results from the Leiden MISSION! intervention study	105
CHAPTER 8	Genetic determinants of adverse outcome (restenosis, malapposition and thrombosis) after stent implantation	125
CHAPTER 9	The 5352 A allele of the pro-inflammatory caspase-1 gene predicts late acquired stent malapposition in stemi patients treated with sirolimus stents	145
CHAPTER 10	Summary, conclusions and future perspectives Samenvatting, conclusies en toekomstperspectieven	159
APPENDIX	List of publications	179
	Acknowledgements	181
	Curriculum vitae	183

