

Edmo Atique Gabriel
Sthefano Atique Gabriel
Editors

Inflammatory Response in Cardiovascular Surgery

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 Springer

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*This book is dedicated to God and to our parents Edmo Gabriel
and Maria Lucia Atique Gabriel.*

*Edmo Atique Gabriel
Stefano Atique Gabriel*

Preface

The inflammatory response is of vital importance in any kind of cardiovascular procedure. However, for several years, this concept has been underestimated and overlooked worldwide. This textbook is intended to serve as a useful tool to provide information on the inflammatory response in cardiovascular surgery.

The scope of this textbook is of interest to various professionals, such as cardiovascular surgeons, vascular surgeons, transplantation physicians, anesthesiologists, intensive care physicians, cardiovascular and vascular fellows, basic science physicians, students, and researchers.

It is divided into sections on general topics, vascular and cardiovascular subjects of great importance for understanding the surgical inflammatory universe. Arranging topics into vascular and cardiovascular sections was difficult but key as there are many details and particularities related to vascular diseases as well as to cardiovascular or cardiothoracic diseases.

Immunologic and physiologic concepts are clarified from the early stages of the book with the aim of preparing readers for the subsequent discussions. For this purpose, topics such as the neuroendocrine response, pathogenesis of atherosclerosis, and mechanisms of inflammation are meticulously addressed. Moreover, these preliminary chapters are fundamental to a better understanding of the inflammatory response in all cardiovascular diseases.

Later chapters elucidate the inflammatory aspects of carotid, venous, arterial, and abdominal aortic aneurysm, peripheral aneurysm, trauma, and visceral pathologies. However, all were written emphasizing the surgical view of pathologic conditions.

In the section about carotid disease, we discuss in detail the inflammatory aspects present in both endarterectomy and carotid angioplasty – two important therapeutic options in the treatment of ischemic brain disease. In the section about abdominal aortic aneurysm, we emphasize its pathogenesis and associated inflammatory aspects, and we include chapters related to endovascular treatment of abdominal aortic aneurysm and endovascular treatment of ruptured abdominal aortic aneurysm.

In the section on critical limb ischemia, we address approaches to arteritis responsible for limb ischemia and include comments on a very current topic – transplantation for limb salvage. In the section on venous disease, we focus on the aspects involved in the inflammation and origin of thromboembolic complications.

Likewise, the cardiovascular or cardiothoracic sections are systematically organized in such a way that general topics as such cardiopulmonary bypass and thyroid hormones come before specific topics such as coronary artery, valve, and congenital heart diseases, thoracoabdominal aneurysm, heart/lung transplantation, ventricular assist devices, and stem cells. On these many featured topics, the authors provide a broad range of very interesting information about inflammation from surgical perspective.

In addition to the traditional topics in cardiovascular surgery, new discussions, for example on the inflammatory aspects of cardiovascular surgery for lung protection, inflammatory aspects related to heart and lung transplantation, both in children and in adults, and the role of stem cells in cardiovascular surgery are included.

We wish to thank all contributors who spent time and made untiring efforts to provide information about the inflammatory response in cardiovascular surgery by writing great chapters. Finally, we express our gratitude to the publisher, Springer, for giving us the opportunity to put together a textbook on the remarkable concept of the inflammatory response in cardiovascular surgery.

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Contents

Part I General Topics

- 1 **Neuroendocrine Response and Shock** 3
Riad N. Younes and Fernando C. Abrão
- 2 **The Role of Lymphocytes in the Pathogenesis of Atherosclerosis:
Focus on CD4⁺ T Cell Subsets** 9
Ingrid E. Dumitriu and Juan Carlos Kaski
- 3 **Immunological Mechanisms of Inflammation** 15
Nilo José Coêlho Duarte, Cyro Alves de Brito, and Alberto José da Silva Duarte

Part II Carotid Diseases

- 4 **Role of Lipoproteins in Carotid Arterial Disease** 29
Efthymios D. Avgerinos and Christos D. Liapis
- 5 **Carotid Endarterectomy: Inflammatory Aspects** 37
Sthefano Atique Gabriel and Edmo Atique Gabriel
- 6 **Endovascular Treatment of Carotid Disease: Inflammatory Aspects** 41
Sthefano Atique Gabriel and Edmo Atique Gabriel

Part III Abdominal Aortic Aneurysm

- 7 **Role of Matrix Metalloproteinases and Aortic Wall Degradation
in Abdominal Aortic Aneurysms** 47
George A. Antoniou and George S. Georgiadis
- 8 **Role of Haptoglobin in Abdominal Aortic Aneurysm** 51
Valerio Napolioni
- 9 **Inflammatory Aortic Aneurysm** 57
Guilherme Vieira Meirelles
- 10 **Endovascular Treatment of Abdominal Aortic Aneurysms:
Current Approaches and New Devices** 63
Armando de Carvalho Lobato, Robert Guimarães do Nascimento,
and Ariele Milano de Oliveira
- 11 **Endovascular Treatment of Ruptured Abdominal Aortic Aneurysms** 73
Frank J. Veith, Mario Lachat, Dieter Mayer, Zoran Rancic, Todd L. Berland,
and Neal S. Cayne

Part IV Critical Lower Limb Ischemia

- 12 Thromboangiitis Obliterans** 79
Otacílio de Camargo Júnior and Juliana Lech de Camargo
- 13 Inflammatory Markers and Mortality in Critical Lower Limb Ischemia** 91
Anders Gottsäter
- 14 Arterial Wall Remodeling and Restenosis Following Vascular Reconstruction** 97
Xue Ma and Randolph L. Geary
- 15 Shear Stress and Endothelial Cell Retention in Critical Lower Limb Ischemia** 107
Caroline Jadlowiec and Alan Dardik
- 16 Arterial Transplantation for Limb Salvage** 117
Thomas Hölzenbein, Nina Mader, Manuela Aspalter, Sophina Trubel, and Klaus Linni

Part V Vascular Trauma

- 17 Disseminated Intravascular Coagulation in Vascular Trauma** 125
Ramyar Gilani, Peter I. Tsai, Matthew J. Wall Jr., and Kenneth L. Mattox
- 18 Temporary Intravascular Shunt in Complex Vascular Injury** 131
Ding Wei-wei and Li Jie-shou

Part VI Venous Diseases

- 19 Metalloproteinases in Acute Venous Occlusion** 141
Anita C. Thomas
- 20 Idiopathic Venous Thromboembolism** 153
Crina Sinescu
- 21 Inflammation, Thrombogenesis, Fibrinolysis, and Vein Wall Remodeling After Deep Venous Thrombosis** 175
Jose Antonio Diaz and Daniel D. Myers Jr.
- 22 Varicose Veins: Venous Wall Changes, Inflammation, and Matrix Metalloproteinases** 185
Joseph D. Raffetto

Part VII Visceral Vasculopathy

- 23 Management of Aneurysms in Takayasu's Arteritis** 193
Christian Espinoza Silva, Diego Soto Valdés, and Vania Rozas Almeida
- 24 Mesenteric Vasculitis** 205
Mateus Picada-Correa and Gustavo S. Oderich

Part VIII Peripheral Aneurysms

- 25 Inflammatory Peripheral Arterial Aneurysms** 215
Gianluca Faggioli, Rodolfo Pini, Mauro Gargiulo, Antonio Freyrie, Raffaella Mauro, and Andrea Stella

| | | |
|---|---|-----|
| 26 | Endovascular Femoropopliteal Interventions: Evolving Devices | 221 |
| | Cassidy Duran and Jean Bismuth | |
| Part IX Cardiopulmonary Bypass | | |
| 27 | Modulation of Inflammatory Response in Cardiopulmonary Bypass | 231 |
| | Shahzad G. Raja | |
| 28 | The Systemic Inflammatory Response Syndrome Following Cardiopulmonary Bypass in Children | 245 |
| | Harald L. Lindberg and Tom N. Hoel | |
| 29 | Vacuum-Assisted Venous Drainage in Cardiac Surgery | 255 |
| | Wakako Fukuda, Takeshi Goto, and Ikuo Fukuda | |
| 30 | Miniaturize CPB Versus Off-Pump Surgery | 259 |
| | Francesco Formica | |
| 31 | Thyroid Hormones and Cardiovascular Surgery | 265 |
| | Edmo Atique Gabriel and Sthefano Atique Gabriel | |
| 32 | Inflammatory Response in Cardiovascular Surgery | 275 |
| | Kaan Kaya | |
| 33 | Lung Protection in Cardiovascular Surgery | 281 |
| | Edmo Atique Gabriel and Sthefano Atique Gabriel | |
| Part X Coronary Artery Disease | | |
| 34 | Fifteen Years of ‘No-Touch’ Saphenous Vein Harvesting in Patients Undergoing Coronary Artery Bypass Surgery: What Have We Learned? | 289 |
| | Michael R. Dashwood and Domingos S.R. Souza | |
| 35 | Platelets and Coronary Artery Disease | 299 |
| | Meinrad Gawaz, Harald Langer, and Tobias Geisler | |
| Part XI Heart Valve Diseases | | |
| 36 | Role of Bone Morphogenetic Proteins in Valvulogenesis | 307 |
| | Russell A. Gould and Jonathan T. Butcher | |
| 37 | Dysfunctional Mechanisms of Anti-inflammation in Aortic Stenosis | 317 |
| | David A. Fullerton and Xianzhong Meng | |
| 38 | Heart Valve Surgery and the Antiphospholipid Syndrome | 321 |
| | Carlos A. Mestres, Cecilia Marcacci, Gerard Espinosa, Jose L Pomar, Andrea Colli, and Ricard Cervera | |
| Part XII Congenital Heart Diseases | | |
| 39 | Neurohormonal Factors in Pediatric Heart Surgery | 333 |
| | Jacek Kolcz | |
| 40 | Antifibrinolytic Therapy in Pediatric Congenital Heart Surgery | 341 |
| | Ehrenfried Schindler | |

| | |
|---|-----|
| 41 Thromboembolism in Cyanotic Heart Disease: Mechanisms and Therapies | 349 |
| Toshio Nakanishi | |
| 42 Endovascular Management of Coarctation of the Aorta | 355 |
| Edward B. Diethrich | |
| Part XIII Thoracoabdominal Aortic Aneurysm | |
| 43 Inflammatory Response in Open and Endovascular Treatment | 369 |
| Edmo Atique Gabriel and Sthefano Atique Gabriel | |
| 44 Surgical Treatment of Aortic Aneurysm in Patients with Aortitis. | 375 |
| Maqsood M. Elahi and Kenton J. Zehr | |
| Part XIV Heart and Lung Transplantation | |
| 45 Cytokine Profile in Heart Transplantation. | 385 |
| Ahmet Ruchan Akar, Serkan Durdu, Bahadır Inan, and Mustafa Sırlak | |
| 46 Platelet Activation After Lung Transplantation | 393 |
| David Sternberg and Joshua Sonett | |
| 47 Role of BNP in Pediatric Heart Transplantation. | 399 |
| Marcelo Biscegli Jatene and Estela Azeka | |
| 48 Nutritional Factors, Oxidative Stress and Lung Transplantation | 403 |
| Janet Madill, Bianca Arendt, Chung-Wai Chow, and Johane Allard | |
| Part XV Ventricular Assist Device | |
| 49 Mechanical Unloading and Heart Remodeling Features | 413 |
| Nikolaos A. Diakos, Omar Wever-Pinzon, Anthony S. Zannas, and Stavros G. Drakos | |
| Part XVI Stem Cells in Cardiovascular Surgery | |
| 50 Cytokine Profiles in Cardiac Diseases and Marrow Stromal Cells Therapy | 421 |
| Nasser Alkhamees, Alice LeHuu, and Dominique Shum-Tim | |
| 51 Hypoxic Preconditioning of Cardiac Progenitor Cells for Ischemic Heart. | 427 |
| Shiyue Xu and Gangjian Qin | |
| Index. | 437 |