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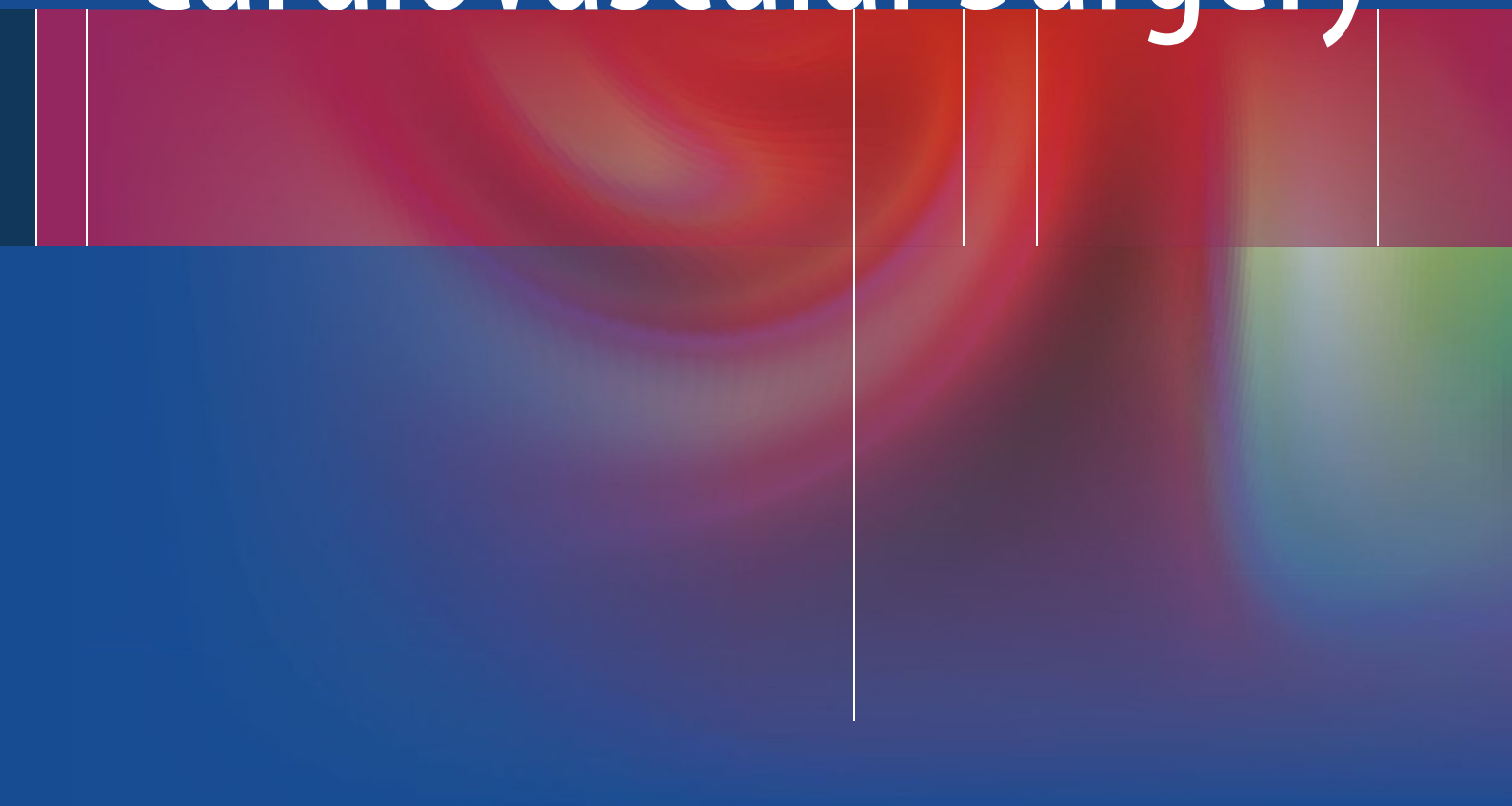
Editors

Inflammatory Response in Cardiovascular Surgery



Springer

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Inflammatory Response in Cardiovascular Surgery

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

Edmo Atique Gabriel
Sthefano 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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Acknowledgments

We thank Springer for the diligent attention and assistance they provided us and for their efforts to make this book possible.

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Contents