Springer 4431680896

Instruction Manual: Coronary Circulation: Basic Mechanism and Clinical Relevance

1. OVERVIEW

This monograph, "Coronary Circulation: Basic Mechanism and Clinical Relevance," addresses the critical importance of coronary heart disease as a major health concern in industrialized nations. It highlights the advancements in both medical and surgical treatments, emphasizing the need for accurate diagnostic methods to assess disease severity, identify treatment alternatives, and evaluate treatment outcomes.

The book integrates recent breakthroughs in basic research concerning coronary circulation, including its intricate interactions with myocardial contraction, relaxation, and neural and humoral control mechanisms. It compiles papers that delve into fundamental mechanisms of coronary circulation and their direct clinical relevance.

The content is designed for a multidisciplinary audience, fostering collaboration between basic scientists and clinicians.

2. KEY TOPICS COVERED

This volume is structured into nine comprehensive chapters, covering a wide range of topics essential for understanding coronary circulation:

- **Chapter 1: Coronary Vascular Anatomy**
  Provides macroscopic and microscopic descriptions of the coronary vascular anatomy, detailing its close relationship to the functions of coronary circulation.

- **Chapter 2: Evaluation Methods for Coronary Blood Velocity**
  Presents two contemporary methods used to evaluate phasic coronary blood velocity waveforms: the laser Doppler method and the ultrasound Doppler method.

- **Chapter 3: Mechanical Properties of Coronary Circulation**
  Describes the mechanical properties of coronary circulation, which are crucial for comprehending coronary arterial and venous blood flow velocity waveforms in relation to cardiac contraction and relaxation.

- *Further chapters delve into additional aspects of coronary circulation, its regulation, and clinical implications.*

3. TARGET AUDIENCE

This book is primarily directed towards a diverse group of professionals and researchers in the medical and scientific

fields, including:

- Physicians, including cardiologists, cardiac surgeons, cardiac radiologists, and anesthesiologists.
- Basic scientists, such as physiologists and bioengineers.
- Researchers and students interested in cardiovascular physiology and pathology.

4. PRODUCT SPECIFICATIONS

General Details

Title: Coronary Circulation: Basic Mechanism and Clinical Relevance

Format: Paperback

Language: English

Print Length: 347 pages

Publication Information

Publisher: Springer

Publication Date: December 14, 2011

Edition: Softcover reprint of the original 1st ed. 1990

ISBN-10: 4431680896

ISBN-13: 978-4431680895

Physical Characteristics

Item Weight: 1.24 pounds

Dimensions: 6.69 x 0.83 x 9.61 inches

5. ABOUT THE AUTHORS AND EDITORS

This comprehensive volume is the result of collaborative efforts by a distinguished group of experts:

- **Editors:** Fumihiko Kajiya, Gerald A. Klassen, Jos A.E. Spaan, Julien I.E. Hoffman
- **Co-editors:** K. Onodera, Y. Maruyama, H. Tomoike, K. Tsujioka

Their collective expertise ensures the accuracy and depth of the information presented, making this a valuable resource for the study of coronary circulation.
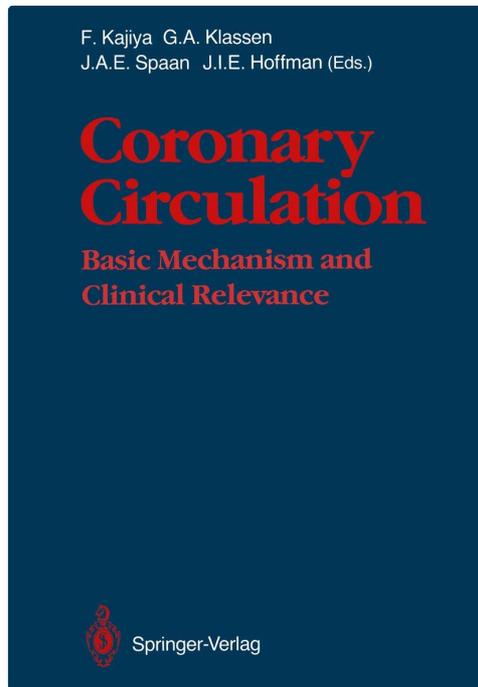
6. PRODUCT IMAGE

Image: Front cover of the book "Coronary Circulation: Basic Mechanism and Clinical Relevance". The cover features the title in large red font on a dark blue background, with the names of the editors and the publisher "Springer-Verlag" at the bottom.

7. PUBLISHER INFORMATION

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