

Andrea Baldini
Patrizio Caldora *Editors*

Perioperative Medical Management for Total Joint Arthroplasty

How to Control Hemostasis,
Pain and Infection

Foreword by
Thomas P. Sculco

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To my mentors Paolo Aglietti and Roberto Buzzi, who taught me the scientific methodology. To my mother and father Nicoletta and Renzo, who taught me that everything is possible with positive thinking. To my beloved wife Irene and to my children Alessandro and Ester, to whom I ask forgiveness for all the moments when I was writing, operating or seeing patients

Andrea Baldini

To my wife Cecilia and to my children Giacomo and Ginevra

Patrizio Caldora

Foreword

Total joint arthroplasty is truly one of the great surgical advances of the twentieth century. It has led to relief of pain and improved mobility in countless sufferers of arthritis throughout the world. The surgical techniques and advances in implant design have led to outstanding outcomes in the vast majority of patients undergoing these procedures. In many hospital centers, joint replacement surgery has become a common procedure, and protocols and clinical pathways continue to evolve in the management of these patients. Certainly, as important as surgical outcome is the perioperative management of patients undergoing joint replacement. Today, arthroplasty surgeons are performing replacement surgery on patients who are complex medically and require proficient perioperative management to mitigate serious complications. These include thromboembolic, wound and periprosthetic infection which can be life threatening and catastrophic. Pain management, particularly after total knee replacement, continues to be a problem in a subset of patients and can lead to a poor surgical result. Drs. Andrea Baldini and Patrizio Caldora have edited a magnificent and much needed text which provides crucial information on the perioperative management of the arthroplasty patient. To my knowledge, there is no other text that covers this material in a comprehensive way and brings a multidisciplinary approach to the topic.

The editors have provided current and evidence-based approaches to blood management, thromboembolic prophylaxis, pain management, infection, and wound problem prevention and treatment. Many of these areas remain heavily debated, but each author documents literature-based rationale for the treatment options recommended. The international perspective is another strength of this book in that authors represent a broad spectrum of arthroplasty expertise globally. Each chapter begins with the “open questions” which are still debated and then provides scientific data for the answers to these controversial questions. Do we need potent anticoagulant agents in patients undergoing joint replacement, how can we prevent allogeneic transfusion and when should we transfuse a patient, what is the best anesthetic technique for arthroplasty, how do you manage the recalcitrant pain after arthroplasty, how do you prevent this pain from occurring at all, and what should you do with a draining wound—these are but a few of the important and constantly debated questions in the arthroplasty patient, and answers are provided in this book.

Cost-effectiveness is a topic which is of global concern in health care and particularly in joint replacement surgery. This is addressed thoroughly in Baldini and Caldora's book in many areas of recovery from joint replacement. Early mobilization of the patient is important to reduce thromboembolic problems, and accelerated clinical pathways have led to early discharge from the hospital. It is crucial, however, that quality and patient safety not be compromised in any measures which reduce cost to the arthroplasty intervention. Often, hospitals harbor virulent and resistant organisms, and the safest environment for the patient is home, and this is emphasized in this text.

I congratulate Drs. Baldini and Caldora on a superb accomplishment in providing a much needed and comprehensive book. It deals with issues of perioperative medicine which are present in a fragmented way in other arthroplasty texts. Here in one place physicians, anesthesiologists, pain management providers, infectious disease experts, and orthopedic surgeons will find the most useful and evidence-based information on significant topics that often determine surgical outcome. It should become a text that is on the desk not sitting on the book shelf of every physician and surgeon that cares for arthroplasty patients.

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Preface

Scientific research on the medical management of patients undergoing arthroplasty has offered new and useful insights to clinical practice in the last decade. In the field of hip and knee arthroplasty surgery, the medical aspects that most affect the final outcome of the procedure are pain management, hemostasis balance, and infection control.

For this reason, we have asked leading national and international experts to participate in the preparation of this volume, which is divided into three sections: each of these parts include topics related to the management of pain, hemostasis, and infection. The authors – and we thank them deeply – represent all medical figures who work every day around the arthroplasty patient: orthopedic surgeons, anesthesiologists, cardiologists, physiatrists, rheumatologists, and infectious disease specialists.

Enhanced control of postoperative pain and bleeding is nowadays allowing faster recovery of patients compared to the past decades, without associated complication risks. This positively reflects on a multitude of health-related factors. We believe that the orthopedic surgeon should be sensitive to the improvements in the medical management of their patients with the same emphasis they have for the advancements in implant design, materials, and surgical technique.

Several medical aspects in the management of the arthroplasty patients are still controversial. For this reason, some chapters are composed by two authors who are presenting their different points of view around the same topic.

Each chapter is characterized by a specific format, which begins with a list of typical, open questions, the most common issues that the practitioner usually wants to clear in their daily practice; they are answered to throughout the chapter; and they are then outlined in the final list of key points.

We hope that readers of these chapters will find the contents full of hints for learning, practical, and most of all useful. The final beneficiaries of this book will be our patients, who will definitely benefit, during their journey through arthroplasty surgery, from the application of the knowledge and tips offered by our admirable authors.

Florence, Italy
Arezzo, Italy

Andrea Baldini
Patrizio Caldora

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