
Preface

Our practice environment largely determines the pathways that our individual orthopedic careers take. It has been a blessing to be in a position that enabled me to expand my surgical techniques and research interest in the evaluation and treatment of posterior cruciate ligament (PCL) injuries and the multiple-ligament-injured knee. I believe the same situation exists for other contributors to this book. We all share a passion and a commitment to the treatment of complex knee ligament instabilities. The purpose of this book is to provide experienced knee surgeons, general orthopedic surgeons, fellows, residents, medical students, and other health care professionals with an interest in PCL injuries and the PCL-based multiple ligament injured knee, a useful tool for the management of these complex injuries.

Posterior Cruciate Ligament Injuries: A Practical Guide to Management, Second Edition, is expanded from 19 chapters in the *First Edition* to 29 chapters in the *Second Edition*. The *Second Edition* is composed of eight functional segments with each segment having a number of chapters. New topics in the *Second Edition* include chapters addressing osteotomy, mechanical graft tensioning, articular cartilage restoration, meniscus transplantation, new cutting edge surgical techniques of PCL reconstruction, outcomes data, selected case studies, and the editor's 25-year evolutionary experience in the evaluation and treatment of PCL injuries and the PCL-based multiple-ligament-injured knee. The chapters were organized and written so that they build upon each other, and also so that they are able to stand alone. This will enable the reader to leisurely explore the topic of the PCL injured knee, or to use the text as a quick, practical reference when the need arises.

Chapter 1 presents the editor's 25-year experience in evaluation and treatment of PCL injuries and the PCL-based multiple-ligament injured knee. Chapters 2 and 3 address anatomy and biomechanics of the knee, while Chaps. 4 through 7 address diagnosis, clinical examination, instrumented measurement, MRI imaging, and nonsurgical treatment of the PCL injured knee. Chapters 8 through 20 provide multiple authors' advanced surgical techniques for PCL reconstruction. Topics in these chapters include graft selection, arthroscopic PCL primary repair, arthroscopic PCL reconstruction techniques, tibial inlay PCL reconstruction surgical techniques, PCL-based multiple knee ligament surgical techniques, PCL reconstruction in patients 18 years of age and younger, and revision PCL reconstruction.

Chapters 21 through 27 address topics that are often encountered when treating PCL injuries. These include mechanical graft tensioning, the role of osteotomy, articular cartilage restoration, meniscus transplantation, postoperative rehabilitation, functional bracing, and complications in PCL injuries and reconstruction.

Chapter 28 presents the results of treatment of PCL surgery from an outcomes data perspective. The final chapter, 29, presents nine case studies in the management of PCL injuries and the PCL-based multiple-ligament-injured knee. Each case study presents a different knee instability problem, and then takes the reader through the decision making process, the surgical treatment, and the final outcome.

The PCL injured knee and the PCL based multiple ligament injured knee are extremely complex pathologic entities. I believe that through research, improved surgical techniques, the use of allograft tissue, advancement in surgical equipment, careful documentation, and experience, we are progressively improving our outcomes in treating this devastating knee injury. It is my personal hope that this book will serve as a catalyst for new ideas to further develop treatment plans and surgical techniques for PCL and related injuries, and that God and His Son Jesus Christ will continue to guide us in the care and treatment of these patients.

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