Unicompartmental Arthroplasty With The Oxford Knee

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Partial Knee Arthroplasty E-Book Springer Science & Business Media
Fully updated with recent technologies, current scientific knowledge, and the latest techniques, A Primer in Cartilage Repair and Joint Preservation of the Knee, 2nd Edition, presents the full range of treatment options for a changing, increasingly younger patient population. Using an easy-to-follow, step-by-step approach, Dr. Thomas Minas clearly teaches how to meet the new challenges of cartilage repair by utilizing the latest techniques and technologies, including advances in orthobiologics. Surgical photographs, abundant illustrations, and procedural videos provide detailed visual guidance. Details the systematic approach to diagnosis, patient management, surgical techniques, and rehabilitation for a variety of problems. Covers current scientific knowledge of cartilage properties, the etiology of damage and the intrinsic repair and regeneration processes. Helps you select the best treatment course for each patient through extensive coverage of options from non-surgical to mini-incision total knee arthroplasty. Discusses the latest evidence, research and challenges associated with new techniques such as MACI, ACI, HTO, DFO, and more. Features new and expanded coverage of the latest advances in orthobiologics including platelet-rich plasma, bone marrow stem cells, fat stem cells, scaffolds and much more. Includes key topics such as printed 3-D cartilage structures and the management of secondary cartilage lesions. Contains high-quality illustrations and surgical photos, as well as new videos that provide clear instructions on how to perform key procedures. Enhanced eBook version included with purchase. Your enhanced eBook allows you to access all of the text, figures, and references from the book on a variety of devices.
Adult Reconstruction Lippincott Raven
Written by leading surgeons with expertise in performing osteotomies around the knee, this book is an essential reference for the current techniques in joint-preserving knee surgery. The book opens with a thorough discussion of physiology, pathophysiology, clinical evaluation, and imaging. It then describes the indications and basic principles of treatment and provides a detailed planning algorithm for high-tibial osteotomy. Separate chapters cover various clinical applications, addressing important topics ranging from the effects of osteotomies on cartilage pressure in the knee to management for failed osteotomies around knee. The book also discusses the latest technological developments in the field, such as computer-assisted navigation and the development of plate fixators. Features: -Clinical insights and practical tips from experts in the field -Detailed presentation of surgical techniques -Numerous high-quality images and illustrations demonstrating key concepts -Discussion of how to manage complications after high-tibial open-wedge osteotomy
Local Infiltration Analgesia Elsevier Health Sciences
Partial Knee Arthroplasty helps you optimize outcomes using the latest best-practice techniques for this increasingly popular procedure. Drs. Keith R. Berend and Fred D. Cushner discuss recent advances and hot topics—such as custom guided implants, biologics, failed PKA, TKA conversion, and

more—along with the challenges of choosing the right technique for each patient. The clear focus on surgical techniques, bulleted key points, and procedural videos online at www.expertconsult.com make this comprehensive, practical reference ideal for learning how to achieve the best results. Access the fully searchable text online at www.expertconsult.com, along with a gallery of procedural videos. Apply recent advances and best-practice techniques effectively thanks to global perspectives and analyses of surgical approaches. Improve patient outcomes with clear, direct, and focused coverage of surgical techniques. Find information quickly and easily with a bulleted format for convenient "at-a-glance" reference to key details and ease of use in a mobile environment.

Functional Fracture Bracing Springer

This book focuses on the current clinical practice, outcome and the future development of Total Knee Arthroplasty (TKA) in surgical settings. A major objective of this work is to address “What is the optimal design and fixation of the implants we use for knee arthroplasty reconstruction? What are the gold standards? and, Can we do better?”. In an attempt to throw light on these questions, the authors evaluate data from clinical studies and assess various factors which may influence the long term outcome of TKA. Many variables such as age, severity, implant design and surgical techniques for appropriate component placement and soft tissue balancing are explored in great detail by expert surgeons in the field. Total Knee Arthroplasty: Long Term Outcomes will be a useful resource for recently qualified surgeons in search of an introduction to this topic and for more experienced surgeons seeking an in-depth critical review of current practices in TKA.

Novel Research about Biomechanics and Biomaterials Used in Hip, Knee and Related Joints Springer Science & Business Media

At the writing of this book, the United States is in the midst of an intense public debate concerning a widely perceived need for reform of the Health Care Delivery System. The reform is primarily aimed at the provision of medical insurance to a large segment of the population currently deprived of that coverage and to the reduction of the escalating costs of medical care. Solutions to the existing problems have been elusive because the causes of the dilemma are multifactorial, complex, and diffucult to identify clearly. There is, however, general consensus that the use and abuse of technology has played a major role in the growing costs of medical care. The importance of fracture care in the overall financing of the health care reform is significant, since injuries to the musculoskeletal system are responsible for a very large percentage of the general expenditures in this area. The cost is not limited to hospitalization and professional services, but also impacts the economy with tempo rary or permanent interruption of individual productivity.

Atlas of Osteoarthritis Cambridge University Press

Frank R. Noyes, MD – internationally-renowned knee surgeon and orthopaedic sports medicine specialist – presents this unparalleled resource on the diagnosis, management, and outcomes analysis for the full range of complex knee disorders. Relies on Dr. Noyes’ meticulous clinical studies and outcomes data from peer-reviewed publications as a scientifically valid foundation for patient care. Features detailed post-operative rehabilitation programs and protocols so that you can apply proven techniques and ease your patients’ progression from one phase to the next. Presents step-by-step descriptions on soft tissue knee repair and reconstruction for anterior cruciate ligament reconstruction, meniscus repair, soft tissue transplants, osseous malalignments, articular cartilage restoration, posterior cruciate ligament reconstruction, and more to provide you with guidance for the management of any patient. Contains today’s most comprehensive and advanced coverage of ACL,PCL, posterolateral, unicompartmental knee replacement, return to sports after injury, along with 1500 new study references supporting treatment recommendations. Features all-new content on unicompartmental and patellofemoral knee replacement, updated operative procedures for posterior cruciate ligament and posterolateral ligament deficiency, updated postoperative rehabilitation protocols, and new information on cartilage restoration procedures and meniscus transplantation. Includes some of the most comprehensive and advanced discussions on arthrofibrosis, complex regional pain syndrome, tibial and femoral osteotomies, and posterolateral reconstructions available in modern published literature. Covers gender disparities in ligament injuries for more effective analysis and management.

Oxford Textbook of Orthopedics and Trauma CRC Press

Evidence-Based Orthopedics is an up-to-date review of the best evidence for the diagnosis, management, and treatment of orthopedic conditions. Covering orthopedic surgery as well as pre- and post-operative complications, this comprehensive guide provides recommendations for implementing evidence-based practice in the clinical setting. Chapters written by leading clinicians and researchers in the field are supported by tables of evidence that summarize systematic reviews and randomized controlled trials. In areas where evidence is insufficient to recommend a practice, summaries of the available research are provided to assist in decision-making. This fully revised new edition reflects the most recent evidence using the approved evidence-based medicine (EBM) guidelines and methodology. The text now places greater emphasis on GRADE—a transparent framework for developing and presenting summaries of evidence—to allow readers to easily evaluate the quality of evidence and the strength of recommendations. The second edition offers a streamlined presentation and an improved standardized format emphasizing how evidence in each chapter directly affects clinical decisions. Incorporating a vast amount of new evidence, Evidence-Based Orthopedics: Features thoroughly revised and updated content, including a new chapter on pediatric orthopedics and new X-ray images Provides the evidence base for orthopedic surgery as well as pediatric orthopedics and orthopedic conditions requiring medical treatment Covers the different methods for most orthopedic surgical procedures, such as hip replacements, arthroscopy, and knee replacements Helps surgeons and orthopedic specialists achieve a uniform optimum standard through a condition-based approach Aligns with internationally accepted guidelines and best health economic principles Evidence-Based Orthopedics is an invaluable resource for orthopedic specialists, surgeons, trauma surgeons, trainees, and medical students.

Unicompartmental Knee Arthroplasty Springer Nature

The Editors of “Essentials of Cemented Knee Arthroplasty” have compiled a comprehensive textbook on what many consider the most successful surgical procedure of the century. This book rounds out the compendium previously published by Springer on arthroplasty related topics: “The Well Cemented Total Hip Arthroplasty”, “PMMA Cements”, and “Management of Periprosthetic Joint Infection”. Unique to this text is the high quality contributions from over 160 world wide experts in the field, and provides a unique international perspective on the multifaceted topic of knee replacement surgery. Sections include a focus on Surgical Indications, Implant Design, Novel Technologies, Complications, and Cementing Technique, amongst others. Each Chapter not only draws on the most current literature on the subject, but also crystalizes the most important points into clinically relevant, practically applicable “take home messages”. This singular text is notable for not only its breadth, but also its depth, and will be an invaluable resource for knee arthroplasty surgeons throughout the globe.

Unicompartmental Arthroplasty with the Oxford Knee Springer Science & Business Media

Joint replacement is a very successful medical treatment. However, the survivorship of hip, knee, shoulder, and other implants is limited. The degradation of materials and the immune response against degradation products or an altered tissue loading condition as well as infections remain key factors of their failure. Current research in biomechanics and biomaterials is trying to overcome these existing limitations. This includes new implant designs and materials, bearings concepts and tribology, kinematical concepts, surgical techniques, and anti-inflammatory and infection prevention strategies. A careful evaluation of new materials and concepts is required in order to fully assess the strengths and weaknesses and to improve the quality and outcomes of joint replacements. Therefore, extensive research and clinical trials are essential. The main aspects that are addressed in this Special Issue are related to new material, design and manufacturing considerations of implants, implant wear and its potential clinical consequence, implant fixation, infection-related material aspects, and taper-related research topics. This Special Issue gives an overview of the ongoing research in those fields. The contributions were solicited from researchers working in the fields of biomechanics, biomaterials, and bio- and tissue-engineering.

Computer and Robotic Assisted Hip and Knee Surgery Elsevier Health Sciences

This is a new 3-volume, major reference work from the Oxford Textbook stable. The Oxford Textbook of Orthopedics and Trauma provides comprehensive coverage of the relevant background science, theory, practice, decision-making skills and operative techniques required to provide modern orthopedic and trauma care. The text is divided into five major sections covering fundamental science, adult orthopedics, trauma, pediatric orthopedics and pediatric trauma. The fundamental science section contains a major subsection on tumors and the adult orthopedics section is further subdivided to cover the joint and bonesystems of the body. Edited by a transatlantic team and written by more than 300 specialist chapter authors, this book is unrivalled in the field. The content is extensively referenced, highly illustrated and contains useful summary boxes throughout the text. The Oxford Textbook of Orthopedics and Trauma is essential reading for trainees and experienced practitioners alike.

Total Knee Arthroplasty Springer

This comprehensive reference on total knee arthroplasty describes all surgical techniques and prosthetic designs for primary and revision arthroplasty, discusses every aspect of patient selection, preoperative planning, and intraoperative and postoperative care.

Postgraduate Orthopaedics Elsevier Science Limited

Pushed by the progress of biology, technology and biomechanics, knee surgery has dramatically evolved in the last decades. This book is a "state of the art" concerning all aspects of knee surgery from ligament reconstruction to Total Knee Arthroplasty. An international panel of renowned authors have worked on this didactic fully illustrated book. It will help young surgeons to understand basic sciences and modern sugical techniques. The experienced surgeon will find help to deal with difficult cases and clarifications in recent technologic advances such as cartilage surgery, navigation and mini invasive surgery.

The Swedish Knee Arthroplasty Study Springer

The introduction of total joint arthroplasty throughout the world has contributed manifold benefits to patients who suffer from joint diseases. Concurrently, however, there has been an increase in revision surgery. Many orthopedic surgeons agree that durability of prostheses is an eternal problem. In particular, periprosthetic osteolysis recently has been identified as one of the serious problems affecting prosthetic dura bility. To improve durability, osteolysis and many other problems must be investi gated and solved both experimentally and clinically with respect to such aspects as prosthetic material, design, and biological and biomechanical behavior. This book comprises 37 papers that were presented by orthopedic surgeons and biomedical engineers at the 28th Annual Meeting of the Japanese Society for Replace ment Arthroplasty, held in March 1998 in Kanazawa, Japan. The volume is thus a compilation of the latest knowledge about the pathogenesis and reduction of osteolysis and wear, newly developed total hip prostheses, and other current topics of total knee arthroplasty. We earnestly hope that this book will be of benefit to clinicians and researchers, and that it will contribute to the creation of more durable total joint prostheses in the future. SHINICHI IMURA v Contents Preface ..... '" .. .. V List of Contributors. . . . . XI . . . . . Part 1 Wear and Pathogenesis of Osteolysis Friction and Wear of Artificial Joints: A Historical Review N. AKAMATSU ..... , 3 Matrix Degradation in Osteoclastic Bone Resorption Under Pathological Conditions .

Unicompartmental Knee Arthroplasty Springer Nature

The techniques of computer and robotic assisted surgery are making a major impact on the practice of orthopaedics. This book provides a complete overview of the technical and clinical aspects of computer-assisted surgery with extensive coverage of the use of robotic and navigation technologies in the surgical setting. The first part of the book presents the clinical problems and describes the basic technological components. The second part of the book describes specific applications in hip and knee reconstructive surgery.

Comprehensive Treatment of Knee Osteoarthritis Springer

This issue of Clinics in Sports Medicine will cover the latest technology and techniques in partial knee arthroplasty, including the use of robotics, different types of custom implants, and advice on return-to-activity. It will also offer information on different possible outcomes and complications that could occur after surgery. This topic has not been covered in Sports Medicine in at least the past ten years, and, as it grows as a popular treatment, it should become a useful issue of CSM.

Knee Surgery John Wiley & Sons

Fracture fixation in osteoporotic bone, fixed angle implants, bone morphogenic proteins - these are just a few of the phrases recently heard in discussions on contemporary osteosynthesis. Featuring the proceedings of the 2008 congress of the Federation of European Societies for Surgery of the Hand (FESSH) held in Lausanne, this book provides a comprehensive overview of the state of the art and summarizes the various new

developments in osteosynthesis. Basic scientific papers and contributions reporting important clinical applications by leaders in their fields highlight some recent issues such as fracture fixation under special conditions, new implant designs, bone substitutes and outcome measurement after fracture treatment. Hand surgeons, orthopedic and trauma surgeons as well as researchers with an interest in fracture treatment of the upper extremity will find this publication of great interest.

Twenty Year Report Karger Medical and Scientific Publishers

This book, written by leading international experts, deals exclusively with reconstruction techniques for the Nipple-Areolar Complex (NAC). The first chapters present the history of the Nipple-Areolar Complex reconstruction and the anatomy of this part of the body. After discussing the abnormalities of the Nipple-Areolar Complex and how to prevent Nipple-Areolar Complex disorders, the book provides extensive documentation on techniques for correcting nipple hypertrophy, nipple inversion, and for increasing nipple projection. Readers will also find helpful information of malposition and tumors of the Nipple-Areolar Complex, as well as complications that can arise during the various surgical techniques. The book offers an invaluable guide for residents and fellow, practicing and highly experienced plastic surgeons, general surgeons, and those in cosmetic surgical subspecialites.

Avulsion and Stress Injuries of the Musculoskeletal System Thieme

Unicompartmental knee arthroplasty (UKA) has been gaining popularity in recent years due to its perceived benefits over total knee arthroplasty (TKA), such as greater bone preservation, reduced operating-room time, better post-operative range of motion and improved gait. However there have been failures associated with UKA caused by misalignment of the implants. To improve the implant alignment a robotic guidance system called the RIO Robotic Arm has been developed by MAKO Surgical Corp (Ft. Lauderdale, FL). This robotic system provides real-time tactile feedback to the surgeon during bone cutting, designed to give improved accuracy compared to traditional UKA using cutting jigs and other manual instrumentation. The University of Strathclyde in association with Glasgow Royal Infirmary has undertaken the first independent randomised controlled trial of the MAKO system against the Oxford unicompartmental knee arthroplasty - the most common manual UKA used in the UK. This thesis investigates the results from a total of 51 patients (23 Mako, 28 Oxford) that underwent a one year post-operative biomechanical assessment. The assessment analysed the biomechanics of these patients performing walking tasks, stair navigation, sit to stand and deep knee lunges using a 3-dimensional, 12 camera motion analysis system (Vicon Motion Systems, Oxford, UK). 3 month post-operative X-rays confirmed that the implant alignment in the Mako group were significantly more accurate than the implants in the Oxford group. Motion analysis showed that during level walking the Mako group achieved a higher knee excursion during the highest flexion portion of the weight bearing stage of the gait cycle (18.6°) compared to the Oxford group (15.8°). This difference was statistically significant (p-value = 0.03). When compared to normal patients the Mako group's knee excursion values were comparable with normal healthy knees, however the Oxford group had significantly lower knee excursion angles at this point. Even though there were some differences seen in the two groups with motion analysis, these factors did not necessarily correlate with better perceived patient function when the knee function scores were compared against the knee excursions. Therefore it is still unclear if improved implant alignment and better knee motion directly correlate with improved function.

Personalized Hip and Knee Joint Replacement Oxford University Press, USA

Written by leading experts in total knee arthroplasty, this volume is a technique-oriented "how-to" guide to revision of failed arthroplasties. The book is sharply focused on the practical skills the surgeon needs to evaluate a failed knee replacement and safely and successfully reconstruct the joint. The authors describe all current reconstructive techniques and prosthetic options and offer advice on preventing and managing complications. More than 500 illustrations, including 188 full-color photographs, complement the text.

Nipple-Areolar Complex Reconstruction Springer Science & Business Media

Since the major pioneering of joint replacement surgery more than fifty years ago, much research and progress has been made in the field of arthroplasty with new insights into better materials, types of cement and bone-cell compatible coatings, and a better understanding of the causes of implant failure. With an increasingly ageing population the requirement for arthroplastic surgery is manifest; over 800,000 hips worldwide are replaced each year, and replacement surgery is performed for almost every joint of the body. The Engineering of Human Joint Replacements covers the design, engineering, production and manufacture of human joint replacements, as well as associated engineering concerns such as surface coatings, orthopedic bone cement, the causes and effects of wear and tear, and rapid prototyping for clinical evaluation. Materials evaluation and selection is discussed, as well as production processes and insertion methods. The author provides an overview of skeletal anatomy and the effects of pain and deterioration in order to put the engineering principles into a medical context. Examples of joint replacements for the most common regions of the body are included, and aspects of clinical studies of these cases are discussed. Key Features: • Provides an overview of the engineering materials and processes involved in the manufacture of human joint replacements • Sets the scene for engineers and clinicians embarking on research into joint replacements • Includes clinical and industrial examples and points the way to future developments • Provides information on medical device companies with an engineering guide to the requirements for joint replacement The Engineering of Human Joint Replacements bridges the divide between engineering and orthopaedic surgery, offering an introductory text to young engineers entering the field, as well as a reference for medical staff who will benefit from an understanding of the materials and methods used in their design, engineering and manufacture.