

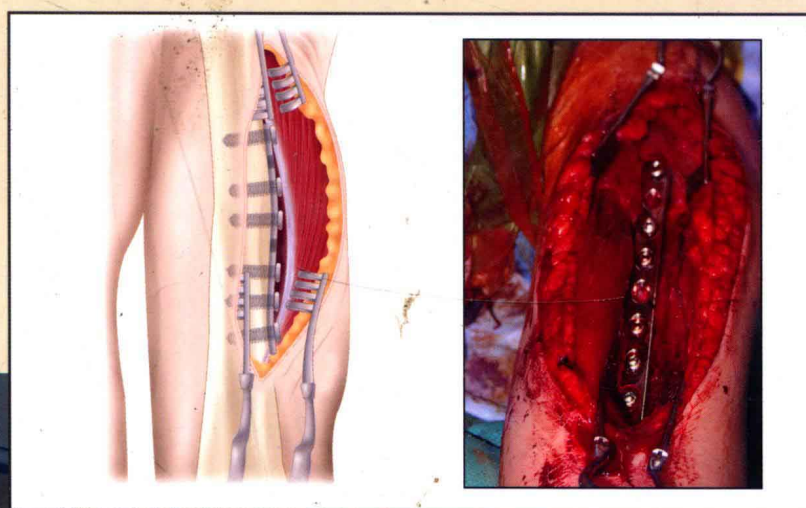
骨科手术操作技术丛书

创伤骨科手术技术

Operative Techniques: Orthopaedic Trauma Surgery

原著 Emil H. Schemitsch
Michael D. McKee

主译 姜保国



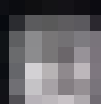
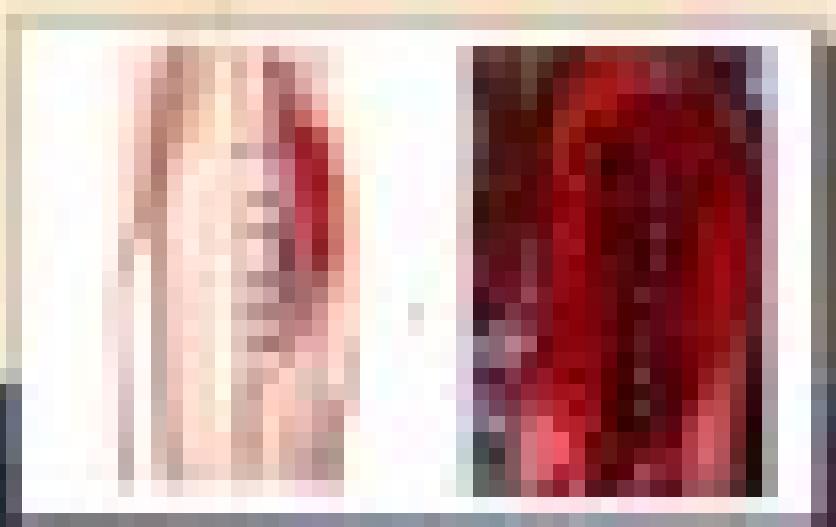
北京大学医学出版社

中国医药出版社

创伤骨科手术技术

Operative Techniques: Orthopaedic Trauma Surgery

- 主编 李维强
- 副主编 李维强
- 主审 李维强



中国医药出版社

创伤骨科手术技术

Operative Techniques: Orthopaedic Trauma Surgery

原 著 Emil H. Schemitsch

Michael D. McKee

主 译 姜保国

副主译 马信龙 吴新宝 沈惠良

张殿英 付中国

北京大学医学出版社

Peking University Medical Press

CHUANGSHANG GUKE SHOUSHU JISHU

图书在版编目 (CIP) 数据

创伤骨科手术技术 / (加) 施密斯 (Schemitsch, E. H.),
(加) 麦基 (McKee, M. D.) 原著; 姜保国主译.
—北京: 北京大学医学出版社, 2012. 3
书名原文: Operative Techniques: Orthopaedic Trauma Surgery
ISBN 978-7-5659-0345-8

I. ①创… II. ①施… ②麦… ③姜… III. ①骨损伤-外科
手术 IV. ①R683

中国版本图书馆CIP数据核字 (2012) 第007803号
北京市版权局著作权合同登记号: 图字: 01-2011-7725

Operative Techniques: Orthopaedic Trauma Surgery
Emil H. Schemitsch, Michael D. McKee
ISBN-10: 1-4160-4935-5
ISBN-13: 978-1-4160-4935-7
Copyright © 2010 by Saunders, an imprint of Elsevier Inc.

Authorized Simplified Chinese translation from English language edition published by the Proprietor.

Elsevier (Singapore) Pte Ltd.
3 Killiney Road, #08-01 Winsland House I, Singapore 239519
Tel: (65) 6349-0200, Fax: (65) 6733-1817
First Published 2012
2012年初版

Simplified Chinese translation Copyright © 2012 by Elsevier (Singapore) Pte Ltd and Peking University Medical Press. All rights reserved.

Published in China by Peking University Medical Press under special agreement with Elsevier (Singapore) Pte Ltd. This edition is authorized for sale in China only, excluding Hong Kong SAR and Taiwan. Unauthorized export of this edition is a violation of the Copyright Act. Violation of this Law is subject to Civil and Criminal Penalties.

本书简体中文版由北京大学医学出版社与Elsevier (Singapore) Pte Ltd.在中国境内 (不包括香港特别行政区及台湾) 协议出版。本版仅限在中国境内 (不包括香港特别行政区及台湾) 出版及标价销售。未经许可之出口, 是为违反著作权法, 将受法律之制裁。

创伤骨科手术技术

主 译: 姜保国

出版发行: 北京大学医学出版社 (电话: 010-82802230)

地 址: (100191) 北京市海淀区学院路38号 北京大学医学部院内

网 址: <http://www.pumpress.com.cn>

E-mail: booksale@bjmu.edu.cn

印 刷: 北京圣彩虹制版印刷技术有限公司

经 销: 新华书店

责任编辑: 安 林 责任校对: 金彤文 责任印制: 张京生

开 本: 889mm × 1194mm 1/16 印张: 52.5 字数: 1336千字

版 次: 2012年3月第1版 2012年3月第1次印刷

书 号: ISBN 978-7-5659-0345-8

定 价: 550.00元

版权所有, 违者必究

(凡属质量问题请与本社发行部联系退换)

手术操作技术丛书

创伤骨科手术技术

Operative Techniques: Orthopaedic Trauma Surgery

注 意

医学领域的知识和最佳临床实践在不断发展。由于新的研究与临床经验不断扩展着我们的知识，我们在遵守标准的安全预防措施的同时，也有必要在治疗和用药方面做出适当的变动。建议读者核对每一用药都要学其生产厂家所提供的最新产品信息，以确定药物的推荐剂量、服用方法、持续时间及相关禁忌证。根据自己的经验和患者的病情，决定每一位病人的服药剂量和最佳治疗方法，是经治医师的责任。不论是出版商还是著者，对于由于本出版物引起的任何个人或财产的损伤或损失，均不承担任何责任。

出版者

译校专家组名单（按姓氏笔画排序）

马信龙	天津医科大学总医院	张殿英	北京大学人民医院
王 钢	南方医科大学南方医院	陈允震	山东大学齐鲁医院
王天兵	北京大学人民医院	陈世益	复旦大学附属华山医院
王文良	天津武警医学院附属医院	陈建海	北京大学人民医院
王光林	四川大学华西医院	陈爱民	上海第二军医大学附属长征医院
付中国	北京大学人民医院	武 勇	北京积水潭医院
刘海春	山东大学齐鲁医院	周谋望	北京大学第三医院
李振峰	山东大学齐鲁医院	姜保国	北京大学人民医院
杨 明	北京大学人民医院	顾立强	中山大学附属第一医院
杨 波	北京协和医院	党 育	北京大学人民医院
吴新宝	北京积水潭医院	徐向阳	上海交通大学医学院附属瑞金医院
余家阔	北京大学第三医院	徐海林	北京大学人民医院
沈惠良	首都医科大学宣武医院	唐康来	第三军医大学西南医院
张培训	北京大学人民医院	薛 峰	北京大学人民医院

译校秘书：张培训 韩 娜 北京大学人民医院

译者名单（按姓氏笔画排序）

马先贵	山东潍坊中医院	张振军	北京大学人民医院
王 刚	北京大学人民医院	陈旭红	北京大学人民医院
王志永	北京大学人民医院	金开基	北京大学人民医院
王艳华	北京大学人民医院	周 靖	北京大学人民医院
王振威	北京大学人民医院	周兵华	第三军医大学西南医院
邓 磊	北京大学人民医院	顾航宇	北京大学人民医院
邓久旭	北京大学人民医院	徐 雷	北京大学人民医院
白 露	北京大学人民医院	徐小东	北京大学人民医院
白春宏	天津武警医学院附属医院	徐春归	北京大学人民医院
华英汇	复旦大学附属华山医院	殷晓峰	北京大学人民医院
安 帅	北京大学人民医院	黄 伟	北京大学人民医院
芦 浩	北京大学人民医院	寇玉辉	北京协和医院
李 轩	中国医学科学院阜外心血管病医院	彭建平	北京大学人民医院
李 涛	北京大学第三医院	韩 娜	北京大学人民医院
李恒超	北京大学人民医院	韩大成	北京市通州区潞河医院
杨贵博	北京大学人民医院	傅 国	中山大学附属第一医院
肖鸿鹄	复旦大学附属华山医院	熊 建	北京大学人民医院
谷 莉	北京大学第三医院	黎庆佃	北京大学人民医院
冷坤鹏	北京大学人民医院	颜勇卿	浙江省宁波市第二医院
张忠礼	山东潍坊市人民医院		

著者名单

Henry Ahn, MD, FRCSC

Assistant Professor, University of Toronto Spine Program, Department of Surgery, University of Toronto; Consultant Spine Surgeon, St. Michael's Hospital, Toronto, Ontario, Canada

Stabilization of Thoracic, Thoracolumbar, and Lumbar Fractures

Ghassan B. Alami, MD

Clinical Fellow, University of British Columbia; Clinical Fellow, Division of Orthopaedic Trauma, Department of Orthopaedics, Vancouver Coastal Health Authority, Vancouver General Hospital, Vancouver, British Columbia, Canada

Tibial Shaft Fractures: Intramedullary Nailing

Sahal Altamimi, MD, FRCS(C)

Clinical Fellow, Division of Orthopaedic Surgery, Department of Surgery, St. Michael's Hospital and University of Toronto, Toronto, Ontario, Canada

Supracondylar Humeral Fractures: The Role of Arthroplasty

George S. Athwal, MD, FRCSC

Assistant Professor of Surgery, University of Western Ontario; Consultant, Hand and Upper Limb Centre, London, Ontario, Canada

Terrible Triad Injuries of the Elbow

Greg K. Berry, MDCM, FRCSC

Assistant Professor, Faculty of Medicine, McGill University; Staff Orthopaedic Surgeon, Montreal General Hospital, McGill University Health Centre, Montreal, Quebec, Canada

Open Reduction and Internal Fixation of Olecranon Fractures; Proximal Tibia Fractures: Intramedullary Nailing; Fractures of the Talus

Mohit Bhandari, MD, MSc, FRCSC

Canada Research Chair in Musculoskeletal Trauma, and Associate Professor, Division of Orthopaedics, Department of Surgery, McMaster University, Hamilton, Ontario, Canada

Femoral Neck Fractures: Open Reduction and Internal Fixation

Piotr A. Blachut, MD, FRCSC

Clinical Professor, Department of Orthopaedics, University of British Columbia; Vancouver General Hospital, Vancouver, British Columbia, Canada

Radial Head Fractures: Open Reduction and Internal Fixation; Treatment of Open Fractures

Richard A. Boyle, MD, MBBS(Hons), FRACS

Orthopaedic Surgeon, Institute of Rheumatology and Orthopaedics, Royal Prince Alfred Hospital, Sydney, Australia

Femoral Neck Fractures: Arthroplasty

Henry M. Broekhuysen, MD, FRCS(C)

Clinical Associate Professor, University of British Columbia; Active Staff, Division of Orthopaedic Trauma, Vancouver General Hospital, Vancouver, British Columbia, Canada

Plate Fixation of Tibial Shaft Fractures

Richard E. Buckley, MD, FRCS(C)

Clinical Professor, Orthopedic Trauma Surgery, University of Calgary; Head, Orthopedic Trauma, Department of Surgery, Foothills Medical Centre, Calgary, Alberta, Canada

Calcaneus Fractures: Open Reduction and Internal Fixation

Chad P. Coles, MD, FRCSC

Assistant Professor, Dalhousie University; Orthopaedic Surgeon, Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia, Canada

Humeral Shaft Fractures: Open Reduction and Internal Fixation and Intramedullary Nailing; Femoral Shaft Fractures: Intramedullary Nailing

Paul J. Duffy, MD, FRCS(C)

Assistant Professor, University of Calgary; Academic Staff Surgeon, Foothills Medical Centre, Calgary, Alberta, Canada

Distal Radius Fractures: External Fixation

William N. Dust, MD, BMedSc, FRCSC, FACS

Professor of Surgery, University of Saskatchewan,
Saskatoon, Saskatchewan, Canada

Pelvic External Fixation

Alun Evans, MD, MSc, FRCS(Tr and Ortho)

Trauma and Orthopedic Fellow, Dalhousie University;
Trauma Fellow, and Staff, Orthopedic Division,
Department of Surgery, Queen Elizabeth II Health
Sciences Centre, Halifax, Nova Scotia, Canada

**Unstable Intertrochanteric Hip Fractures: Open
Reduction and Internal Fixation; Anterior Pelvic
Internal Fixation**

Wade Gofton, MD, MEd, FRCSC

Assistant Professor of Surgery, University of Ottawa
Hospital, Ottawa, Ontario, Canada

**Intertrochanteric Hip Fractures: Intramedullary
Nailing; Subtrochanteric Femur Fractures:
Intramedullary Nailing**

Christina Goldstein, MD

Resident, Division of Orthopaedics, Department of
Surgery, McMaster University, Hamilton, Ontario,
Canada

**Femoral Neck Fractures: Open Reduction and
Internal Fixation**

Chris Graham, MD, FRCSC

Assistant Professor, University of Manitoba; Staff
Orthopaedic Surgeon, Health Sciences Centre,
Winnipeg, Manitoba, Canada

**Operative Treatment of Fractures of the Patella;
Operative Management of Ankle Fractures**

Pierre Guy, MD, MBA, FRCSC

Assistant Professor, Division of Orthopaedic Trauma,
Department of Orthopaedics, University of British
Columbia, Vancouver, British Columbia, Canada

**Glenoid Fracture: Open Reduction and Internal
Fixation and Arthroscopically Assisted Fixation;
Proximal Humerus Fractures: Open Reduction
and Internal Fixation and Arthroplasty; Treatment
of Open Fractures**

Jeremy A. Hall, MD, MEd, FRCSC

Assistant Professor, University of Toronto; Staff
Orthopaedic Surgeon, St. Michael's Hospital,
Toronto, Ontario, Canada

**Open Reduction and Plate Fixation of Displaced
Clavicle Fractures; External Fixation of Distal
Tibial Fractures**

Edward J. Harvey, MD, MSc, FRCSC

Associate Professor, Division of Orthopaedic Surgery,
McGill University; Staff Surgeon, Head, Section of
Trauma and Section of Upper Extremity Surgery,
Division of Orthopaedic Surgery, McGill University
Health Centre, Montreal, Quebec, Canada

**Distal Radius Fractures: Open Reduction and Internal
Fixation; Scaphoid Fracture Fixation**

Michael A. Hickey, MD

Chief Resident, Division of Orthopaedic Surgery,
Department of Surgery, McMaster University,
Hamilton, Ontario, Canada

**Supracondylar Femur Fractures: Retrograde
Intramedullary Nailing**

Richard Jenkinson, MD, FRCSC

Lecturer, University of Toronto; Orthopaedic
Surgeon, Division of Orthopaedic Surgery,
Sunnybrook Health Sciences Centre, Toronto,
Ontario, Canada

**Open Reduction and Internal Fixation of the
Acetabulum: Posterior Approaches**

Michael Kelly, MD

Clinical Fellow, University of British Columbia;
Clinical Fellow, Division of Orthopaedic Trauma,
Department of Orthopaedics, Vancouver Coastal
Health Authority, Vancouver General Hospital,
Vancouver, British Columbia, Canada

Tibial Shaft Fractures: Intramedullary Nailing

Graham J. W. King, MD, MSc, FRCSC

Professor, University of Western Ontario; Chief of
Orthopaedics, St. Joseph's Health Centre, London,
Ontario, Canada

Terrible Triad Injuries of the Elbow

Hans J. Kreder, MD, MPH, FRCS(C)

Professor, Department of Orthopaedic Surgery
and Health Policy Evaluation and Management,
University of Toronto; Chief, Holland
Musculoskeletal Program, and Marvin
Tile Chair and Chief, Division of Orthopaedic
Surgery, Sunnybrook Health Sciences Centre,
Toronto, Ontario, Canada

**Subtrochanteric Fractures: Plate Fixation; Open
Reduction and Internal Fixation of the
Acetabulum: Posterior Approaches; Total Hip
Replacement for Intertrochanteric Hip Fractures**

Paul R. T. Kuzyk, MD, MASC, FRCS(C)

Clinical Fellow, St. Michael's Hospital and University of Toronto, Toronto, Ontario, Canada

Open Reduction and Internal Fixation of Intra-Articular Fractures of the Distal Humerus; Open Reduction and Internal Fixation of Forearm Fractures

G. Yves Laflamme, MD, FRCS(C)

Assistant Professor, Department of Surgery, University of Montreal; Assistant Professor and Head of Orthopaedic Trauma, Hôpital du Sacré-Coeur de Montreal, Montreal, Quebec, Canada

Open Reduction and Internal Fixation of the Acetabulum: Posterior Approaches; Fixation of Periprosthetic Femoral Fractures Using Locked Plates Combined with Minimally Invasive Insertion; Acute Total Hip Arthroplasty for Acetabular Fractures; Optimizing Perioperative Fracture Care

Abdel-Rahman Lawendy, MD, FRCSC

Assistant Professor, Division of Pediatric Surgery, Division of Orthopaedics, Department of Surgery, University of Western Ontario; Victoria Hospital, London Health Sciences Centre; Associate Scientist, Lawson Health Research Institute, London, Ontario, Canada

Compartment Syndrome

Kelly A. Lefaivre, MD

Assistant Professor, University of British Columbia; Orthopaedic Surgeon, Division of Orthopaedic Trauma, Vancouver Coastal Health Authority, Vancouver General Hospital, Vancouver, British Columbia, Canada

Proximal Tibia Fractures: Open Reduction and Internal Fixation

Ross K. Leighton, MD, FRCS(C), FACS

Professor of Surgery, Dalhousie University; Professor of Surgery, and President of Doctors Nova Scotia, Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia, Canada

Unstable Intertrochanteric Hip Fractures: Open Reduction and Internal Fixation; Anterior Pelvic Internal Fixation

Allan S. L. Liew, MD, FRCS(C)

Assistant Professor of Surgery, University of Ottawa; Director of Orthopaedic Trauma, The Ottawa Hospital, Ottawa, Ontario, Canada

Tibial Plafond Fractures: Open Reduction and Percutaneous Plating

Mark D. MacLeod, MD, FRCSC

Associate Professor, Department of Surgery, University of Western Ontario; Orthopaedic Surgeon, London Health Sciences Centre, London, Ontario, Canada

Proximal Tibia Fractures: External Fixation I: Temporary Knee Bridging External Fixation; Proximal Tibia Fractures: External Fixation II: Circular External Fixation

Dean G. Malish, MD, FRCSC

Clinical Instructor, Department of Orthopaedics, University of British Columbia, Vancouver; Clinical Staff, Division of Orthopedics, Kelowna General Hospital, Kelowna, British Columbia, Canada

Radial Head Fractures: Open Reduction and Internal Fixation

Scott J. Mandel, MD, FRCSC

Assistant Clinical Professor, McMaster University, Hamilton, Ontario, Canada

Proximal Humerus Fractures: Hemiarthroplasty Operative Technique; Knee Dislocations

Gerard March, MD

PGY5—Orthopaedic Resident, Memorial University of Newfoundland, St. John's, Newfoundland, Canada

Proximal Humerus Fractures: Hemiarthroplasty Operative Technique

Rod Martin, MD, FRCSC

Clinical Professor, Memorial University of Newfoundland, St. John's, Newfoundland, Canada

Proximal Humerus Fractures: Hemiarthroplasty Operative Technique

Paul A. Martineau, MD, FRCSC

Assistant Professor, Division of Orthopaedic Surgery, McGill University; Staff Surgeon, Section of Upper Extremity Surgery and Section of Sports Medicine, Division of Orthopaedic Surgery, McGill University Health Centre, Montreal, Quebec, Canada

Distal Radius Fractures: Open Reduction and Internal Fixation; Scaphoid Fracture Fixation

Randy Mascarenhas, MD

Orthopaedic Surgery Resident, Section of Orthopaedic Surgery, University of Manitoba, Winnipeg, Manitoba, Canada

Operative Treatment of Fractures of the Patella

Paul K. Mathew, MD, FRCSC

Assistant Clinical Professor, McMaster University;
Consultant, Cambridge Memorial Hospital,
Cambridge, Ontario, Canada

Terrible Triad Injuries of the Elbow

**Robert G. McCormack, MD, FRCSC(C),
DipSportsMed**

Associate Professor, University of British Columbia,
Vancouver; Associate Department Head, Royal
Columbian Hospital, New Westminster, British
Columbia, Canada

**Humeral Shaft Fractures: Open Reduction and
Internal Fixation and Intramedullary Nailing**

Michael D. McKee, MD, FRCSC(C)

Professor, Division of Orthopaedics, Department of
Surgery, St. Michael's Hospital and University of
Toronto, Toronto, Ontario, Canada

**Open Reduction and Plate Fixation of Displaced
Clavicle Fractures; Supracondylar Humeral
Fractures: The Role of Arthroplasty; Radial Head
Arthroplasty**

Peter J. O'Brien, MD

Associate Professor, Department of Orthopaedics,
University of British Columbia; Head, Division of
Orthopaedic Trauma, Vancouver Coastal Health
Authority, Vancouver General Hospital, Vancouver,
British Columbia, Canada

**Proximal Tibia Fractures: Open Reduction and
Internal Fixation; Tibial Shaft Fractures:
Intramedullary Nailing**

Kostas P. Panagiotopoulos, MD, FRCSC

Clinical Instructor, University of British Columbia,
Vancouver; Orthopaedic Surgeon, Lion's Gate
Hospital, North Vancouver, British Columbia

Treatment of Open Fractures

Steven Papp, MSc, MDCM, FRCSC

Assistant Professor, University of Ottawa;
Orthopaedic Trauma, Ottawa Civic Hospital,
Ottawa, Ontario, Canada

**Radial Head Arthroplasty; Intertrochanteric Hip
Fractures: Intramedullary Nailing; Subtrochanteric
Femur Fractures: Intramedullary Nailing**

Brad Petrisor, MD, MSc, FRCSC

Assistant Professor, Department of Surgery,
McMaster University; Orthopaedic Trauma Service,
Hamilton Health Sciences: General Hospital,
Hamilton, Ontario, Canada

**Supracondylar Femur Fractures: Retrograde
Intramedullary Nailing; Repair of Tarsometatarsal
Joint (Lisfranc) Fracture-Dislocation**

Brad Pilkey, MD, FRCSC

Assistant Professor and Director of Orthopaedic
Trauma, University of Manitoba; Adult
Orthopaedic Surgeon and Director of Orthopaedic
Trauma, Health Sciences Centre, Winnipeg,
Manitoba, Canada

**Perilunate Injuries: Combined Dorsal and Volar
Approach**

Rudolf Reindl, MD, FRCSC

Assistant Professor, Orthopaedic Surgery, McGill
University; McGill University Health Centre,
Montreal, Quebec, Canada

Cervical Spine: Anterior and Posterior Stabilization

Dominique M. Rouleau, MD, MSc, FRCSC

Associate Professor, University of Montreal; Director
of Orthopaedic Clinical Research, Hôpital du
Sacré-Coeur de Montreal, Montreal, Quebec,
Canada

Optimizing Perioperative Fracture Care

Marie-Ève Rouleau, MPS

University of Quebec at Montreal, Montreal,
Quebec, Canada

Optimizing Perioperative Fracture Care

David W. Sanders, MD, MSc, FRCSC

Associate Professor, Division of Orthopaedic Surgery,
University of Western Ontario; Orthopaedic
Trauma Surgeon, Victoria Hospital, London Health
Sciences Centre, London, Ontario, Canada

Compartment Syndrome

Emil H. Schemitsch, MD, FRCSC(C)

Professor of Surgery, and Head, Division
of Orthopaedic Surgery, Department of Surgery,
St. Michael's Hospital and University of Toronto,
Toronto, Ontario, Canada

**Open Reduction and Internal Fixation of
Intra-Articular Fractures of the Distal Humerus;
Open Reduction and Internal Fixation of Forearm
Fractures**

Rajrishi Sharma, MD

Chief Resident, Division of Orthopaedic Surgery,
Department of Surgery, McMaster University,
Hamilton, Ontario, Canada

**Repair of Tarsometatarsal Joint (Lisfranc)
Fracture-Dislocation**

David J. G. Stephen, MD, FRCSC(C)

Associate Professor, Department of Surgery,
University of Toronto; Director of Orthopaedic
Trauma, Sunnybrook Health Sciences Centre,
Toronto, Ontario, Canada

Anterior Approaches to the Acetabulum

Trevor B. Stone, MD, FRCS(C)

Clinical Professor, University of British Columbia,
Faculty of Medicine, Department of Orthopaedics,
Royal Columbia Hospital, Vancouver, British
Columbia, Canada

Pelvic External Fixation

Ayman M. Tadros, MD, FRCSI

Orthopaedic Trauma Fellow, Division of Orthopaedic
Trauma, Department of Orthopaedics, University
of British Columbia, Vancouver, British Columbia,
Canada

**Glenoid Fracture: Open Reduction and Internal
Fixation and Arthroscopically Assisted Fixation**

Max Talbot, MD, FRCSC

Assistant Professor, McGill University; Staff Surgeon,
Montreal General Hospital, McGill University
Health Centre; Major, and Medical Director,
Canadian Forces Trauma Centre (East); National
Defence, Government of Canada, Montreal,
Quebec, Canada

**Proximal Tibia Fractures: Intramedullary Nailing;
Fractures of the Talus**

James Vernon, MSc, MBBS

Orthopaedic Surgery Resident, University of
Manitoba, Winnipeg, Manitoba, Canada

Operative Treatment of Fractures of the Patella

James P. Waddell, MD, FRCSC

Professor, Division of Orthopaedic Surgery, University
of Toronto, Toronto, Ontario, Canada

Femoral Neck Fractures: Arthroplasty

Don W. Weber, MD, FRCS(C)

Assistant Clinical Professor of Orthopaedics,
University of Alberta; Site Chief of Orthopaedics,
University of Alberta Hospital, Edmonton, Alberta,
Canada

**Supracondylar Femur Fractures: Open Reduction and
Internal Fixation**

Neil J. White, MD, FRCSC

Chief Resident, Foothills Medical Centre, Calgary,
Alberta, Canada

Distal Radius Fractures: External Fixation

Jeff Yach, MD, FRCS(C)

Assistant Professor of Surgery, Queen's University at
Kingston; Orthopaedic Trauma Service Chief,
Kingston General Hospital, Kingston, Ontario,
Canada

**Open Reduction and Internal Fixation of Intra-
articular Iliac Fracture-Subluxation (Crescent
Fracture); Open Reduction and Internal Fixation
of Sacral Fractures**

译者前言

由加拿大多伦多大学St. Michael's Hospital的Emil H. Schemitsch和Michael D. McKee教授等编写的《Operative techniques: orthopaedic trauma surgery》一书共分三部分52章节。全书共介绍了上肢、下肢和脊柱、骨盆的多种创伤骨科的手术技术。每个章节都包括手术适应证与治疗选择的争议、术前准备、重要相关解剖、手术步骤与手术要点、术后处理和预期结果。每章后均对与该章节内容关系密切的重要参考文献进行了概述，利于读者深入阅读。

此书以介绍手术技术为主。参与翻译的作者不乏国际、国内知名的创伤骨科专家，内容几乎涉及了创伤骨科所有重要领域，所介绍的也都是较为成熟和广受认可的手术技术。原书作者采用大量的手术照片对手术步骤进行了详细的讲解，对重要手术解剖和手术关键点还同时采用大量彩色插图予以突出，十分利于读者理解学习，具有很强的实用性。

本书由全国多家医院的多名译者分别完成，文笔上难达一致；而且由于译者水平有限，不足与错误之处，恳请读者予以谅解和指正。

姜保国

教授、博士生导师

北京大学医学部副主任

北京大学人民医院创伤骨科主任

北京大学交通医学中心主任

著者前言

在骨科医生心目中，骨折手术占据了非常重要的位置。本书正是一部涵盖了各类常见骨折手术规程的专著，既易于应用又贴近临床实践。对骨科医师而言，无论其专注于何种分支专业，都需要在知识方面掌握或在临床当中参与骨折患者的处理。值班医师在临床常会遇到各种情况，他们希望能够对相关的外科处理知识加以巩固，这也是我们撰写本书的初衷之一。

关于骨折手术的知识体系日渐复杂，显然，在临床中，应用外科介入技术取得的成败常饱受争议。然而，对骨折外科技术层面的理解仍然具有非常重要的意义。本书的作者阐述了很多充满智慧的经验之谈，并希望这些方法可以处理在很多情况复杂的骨折患者身上所发现的潜在风险。

本书各章均由加拿大骨外伤学会（Canadian Orthopaedic Trauma Society, COTS）的成员撰写。COTS是一个骨外科专家组织，其成员均具有高超的外科技术，是各自领域的领军人物。此外，这些专家还进行了各类前瞻性随机试验，一直处于骨折患者治疗研究的第一线。本书各章均从技术角度进行了综合阐述，并采用该领域的最佳例证佐以支持。

我们已尽己所能来使本书的内容质量达到最高的水准。特别需要提出的是，书中美轮美奂的插图均明晰地呈现了骨折手术中复杂的技术层面。我们想在此感谢所有参与本书编写工作的COTS成员，他们出色的工作使本书的成功出版变为现实。我们预感到，在今后的若干年内，本书一定会成为现代骨折治疗的“参考大全”。无论是希望在本领域中术业有专攻的年轻医师，还是那些希望技艺更为精湛的资深专家，抑或是水平处于二者之间的医师，本书都具有很高的参考价值。

Emil H. Schemitsch, MD, FRCS(C)

Michael David McKee, MD, FRCS(C)

序

在过去的20年中，针对创伤骨科患者的治疗发生了令人印象深刻的改变。近期，对其相关“治疗标准”的修订也十分值得关注。

加拿大骨外伤学会（Canadian Orthopaedic Trauma Society, COTS）作为加拿大骨科学会的分支机构，正是促成这一改变的中坚力量。仅在2008年，在骨外伤领域，来自加拿大学者的论文在一级论文中的数量就已占到30%，其中绝大部分是由COTS的成员（独立或合作）发表的。

作为这一骨外伤领域变革的主要参与者，该团队在多中心前瞻性随机试验方面的成功得到了加拿大骨科学会和骨外伤学会的高度肯定，具体情况在Injury（创伤）杂志2009年的一篇特约报道中有详细叙述。COTS团队在其相关领域中进行了出色的临床随机试验，并且促成了临床骨折治疗方面的改变，因此，作为对其杰出贡献的一种肯定，他们几乎获得了相关国际组织颁发的所有奖项。

与此同时，Emil Schemitsch博士尝试对住院医师及护士在临床中可能采用的各类治疗方式加以总结，以期为患者找到一种可获取最佳治疗方案的方法。本书就是这样一本参考指南，将其内容以一种非常易于使用的方式呈现。对于完成这一工作的COTS和出版社（Elsevier Inc.和Bermedica Production, Ltd.）成员的聪明才智，我表示非常赞赏。通过精彩的临床图片（和绘画者的演绎）使书中的内容得到了强化，也使本书在临床中的使用变得非常方便。将每个领域的临床手段通过“要点”和“注意事项”的方式来加以说明，对于所有参与患者诊治的成员而言是很大的帮助。我相信本书会成为每一位创伤骨科医生的必备读物。

COTS是一支卓越的创伤骨科团队，我很荣幸能成为其中的一员。他们在治疗患者和钻研专业方面兢兢业业，极其重视外科手术技术的研究，渴望在本地、国内和国际上作为演讲者将其在骨科学中的发现与同行分享。他们通过教学、技能指导和撰写本书来达成这一愿望。未来5年之内，本书必将成为一部创伤骨科领域的“参考大全”，对于所有专注于骨折患者治疗的健康从业者大有裨益。

在此，COTS谨向我们的家人们表示由衷的感激，尽管由于我们特殊的工作性质，我们不得不长时间工作，错过很多家庭大事，但家人却依然给予我们一如既往的支持。他们的支持是我们不断获得成功的不可或缺的保障。

这本可读性很强的专著会成为您日常工作的好帮手，我对此深信不疑。

Ross K. Leighton, MD, FRCS(C), FACS

President of COTS

President elect of the COA

Professor of Surgery

Department of Surgery, Dalhousie University

Division of Orthopedics, QE II HSC

Halifax, Nova Scotia

Canada

目 录

第一部分 上 肢

1. 上肢切开复位接骨板内固定治疗移位的锁骨骨折	2
2. 肩盂骨折：切开复位内固定和关节镜辅助下内固定	9
3. 肱骨近端骨折：切开复位内固定及关节置换	34
4. 肱骨近端骨折：半肩关节置换技术	65
5. 肱骨干骨折：切开复位内固定以及髓内钉固定	81
6. 切开复位内固定治疗肱骨远端关节内骨折	96
7. 全肘关节成形术治疗肱骨远端骨折：关节成形术的作用	106
8. 肘关节的恐怖三联损伤	118
9. 桡骨头骨折：切开复位内固定	141
10. 桡骨头置换术	158
11. 鹰嘴骨折切开复位内固定术	173
12. 前臂骨折的切开复位内固定术	186
13. 桡骨远端骨折：外固定	197
14. 桡骨远端骨折：切开复位内固定	212
15. 舟状骨骨折固定：切开复位内固定	235
16. 月骨周围损伤：掌侧、背侧联合入路	253

第二部分 下 肢

17. 股骨颈骨折：切开复位内固定	262
18. 股骨颈骨折：人工关节置换	280
19. 不稳定的粗隆间骨折：切开复位内固定	293
20. 粗隆间骨折：髓内钉	304
21. 转子下骨折：金属板固定	315
22. 股骨转子下骨折：髓内钉	339
23. 股骨干骨折：髓内钉	355
24. 股骨髁上骨折：切开复位和内固定	368