

ORTHOPAEDICS

Principles and Their Application

SAMUEL L. TUREK, M.D.

*Assistant Attending Orthopaedic Surgeon, Mount Sinai
Hospital, Miami Beach, Florida; Formerly Attending
Orthopaedic Surgeon, Weiss Memorial Hospital, Chicago;
Instructor, Department of Orthopaedic Surgery,
Northwestern University Medical School*

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ORTHOPAEDICS

Principles and Their Application

To My Son
Charles David Turek, M.D.
Who Represents the Future of
Orthopaedic Surgery

Foreword

Several years ago Dr. Turek came to my office and talked with me about the possibility of preparing a textbook or reference book on orthopaedic surgery. Not since the second edition of Jones and Lovett was published in 1929 has there been a truly comprehensive reference book dealing with the general principles of orthopaedic surgery. I tried to discourage Dr. Turek by relating to him the extremely arduous labor which would confront him if he did undertake so massive a task. He could not be discouraged so easily, and for these past several years he has sacrificed his own private practice and given almost all of the time which should have been assigned to his leisure to the writing and the preparation of this volume.

Vaccines, antibiotics and new developments in surgery have greatly changed the orthopaedic practice during the last two decades. The author of a new textbook must emphasize these changed aspects of the orthopaedic picture. Dr. Turek has attempted to do this by giving much space to the description of general orthopaedic conditions such as osteoporosis, metabolic bone diseases and to orthopaedic neurology. The thorough manner in which he has discussed basic principles and fundamentals, such as embryology, histology and physiology of bones and joints is indeed commendable. It is hoped that this will prove to be a textbook of value to the medical students and a book of reference for the experienced surgeon.

EDWARD L. COMPERE, M.D.

Preface to the Second Edition

The specialty of orthopaedic surgery is indivisible from other fields of medical science. Evolution of new diagnostic and therapeutic measures elsewhere must naturally have a parallel influence upon the orthopaedic surgeon; conversely, any improvement in skills related to the musculoskeletal system will be reflected in other specialties. As an example, surgery to correct a painful disability in a cardiac patient is no longer prohibitive and may even dramatically effect considerable improvement in the cardiac status. Therefore, it is essential that the orthopaedic surgeon become a well-read individual, highly sophisticated in the medical disciplines, particularly as they are related to his field of interest. His perspective must never be narrowed, his thirst for knowledge never quenched, and his curiosity for the unknown never restrained. His decisions must take into account the whole human being. This philosophy pervades this book, for only by probing and exploring beyond the generally accepted limits of orthopaedic surgery and being prepared to reject time-worn ideas as truths begin to unfold can one say that this represents a record of continuing progress in this specialized field.

Vast strides are being made in orthopaedic surgery. The specialty has only just emerged from its formative stages and has yet to reach maturity. A tremendous complex of interrelated problems are continuing to present gargantuan challenges which are being met boldly. In the laboratory the electron microscope and advanced histologic technics, such as frozen-tissue preparations, radioisotopes and chemical analysis, are revealing the ultrastructure and the metabolic processes of connective tissue. Teaching methods have undergone radical change so that the orthopaedic neophyte while yet within the medical school environs may begin to correlate the new fund of knowledge with his chosen specialty. The full-time teacher is now playing an important role in coordinating and supervising activities related to research and the preparation of the maturing specialist. Better diagnostic procedures and

surgical technics are being developed.

This book, which is designed to provide a guide to the principles and the practice of orthopaedic surgery, must keep pace with changing concepts. It must remain forever a record of accurate up-to-date information derived from authoritative sources. It is because of this dynamism of change that this book can never remain unalterable.

Progress in related medical specialties is having a profound effect on the concepts originally outlined 10 years ago. For example, cerebrovascular disease is now known to be intimately related to degenerative disease of the cervical spine, and some of the symptoms formerly attributed to nerve root compression are now known to result from inadequate blood flow through the carotid and the vertebral artery channels to the base of the brain. Vascular disease is being differentiated more readily as a cause of pain in an extremity and may be successfully dealt with surgically. New concepts in surgical technic have improved the outlook in certain diseases such as osteogenesis imperfecta and cerebral palsy. Increasing interest in deformities of rheumatoid arthritis is formulating basic principles of treatment. Some progress has been made in clarifying the nature of cervical injuries. These are only a few of the many subjects which have been added to this edition. Needless to say, many corrections and deletions have been a natural consequence of the enlightenment of time, and it is anticipated that this book will continue to undergo transformation. A principle is only basic to the conditions of the moment, and with an awakening to further knowledge new fundamentals are born.

The very nature of orthopaedic surgery creates an inexhaustible source of material for the inquisitive mind, and the possibilities are endless. It is hoped that this textbook will not only provide a continuing reference of fundamentals but will also motivate the orthopaedic surgeon to fulfill his mission as a surgeon, a teacher and a research scientist.

SAMUEL L. TUREK, M.D.

Contents

PART ONE: THE BASIC SCIENCES

1. DEVELOPMENT OF THE SKELETON	3
Cartilage	3
Bone	3
Joints	5
Morphogenesis of the Axial Skeleton	5
Morphogenesis of the Appendicular Skeleton	7
2. HISTOLOGY OF BONE	10
General Microscopic Appearance	11
Structure of Bone	11
Histogenesis of Bone	13
Remodeling of Bone	14
Development of the Whole Bone	16
Biochemical Considerations	16
3. HISTOLOGY OF CARTILAGE	17
Hyaline Cartilage	17
Elastic Cartilage	17
Fibrocartilage	18
Histogenesis of Cartilage	19
Regeneration of Cartilage	19
Cartilage Changes in Growth	19
Physiologic Facts	19
4. HISTOLOGY OF SKELETAL MUSCLE	20
Sarcolemma and Sarcolemmal Nuclei	20
Myofibrils and Striations of the Muscle Fiber	21
Sarcoplasm	22
Supporting Tissues of Muscle	22
5. PHYSIOLOGY OF BONE	23
Composition of Bone	23
Function of Bone Units	23
Minerals	23
Vitamins	26
Glands of Internal Secretion	27
Enzymes	33
Cartilage Physiology	34
Physiology of Joints	35
Physiology of Skeletal Muscle	37
Clinical Applications	41
6. BASIC HISTOPATHOLOGY OF BONE	44
Local Factors Influencing Osteogenesis	44

6. BASIC HISTOPATHOLOGY OF BONE—(<i>Cont.</i>)	
Repair of Fractures	44
Delayed Union and Nonunion	46
Aseptic Necrosis of Bone	49
Radiation Necrosis of Bone	51
Caisson Disease	53
Transplantation of Bone	54

PART TWO: GENERAL ORTHOPAEDIC CONDITIONS

7. METABOLIC BONE DISEASE AND RELATED DYSFUNCTION OF THE PARATHYROID GLANDS	59
Factors Affecting Calcium Metabolism	59
Parathyroid Glands	59
Primary Hyperparathyroidism	61
Identification of Subclinical Parathyroid State	65
Hypoparathyroidism	66
Pseudohypoparathyroidism	66
Low Phosphorus Rickets and Osteomalacia	66
Calcium-Deficiency Diseases	66
Malabsorption Syndrome	75
Hypophosphatasia	76
Scurvy	76
Gout	78
Ochronotic Arthritis	85
Osteoporosis	87

8. INFECTIONS OF BONE	90
Osteomyelitis	90
Acute Osteomyelitis	90
Chronic Osteomyelitis	94
Sclerosing Osteomyelitis of Garré	98
Tuberculosis of Bones and Joints	98
Syphilis of Bones and Joints	107
Mycotic Infection of Bone	111
Maduramycosis	113
Sporotrichosis of Bone	114
Salmonella Osteomyelitis	116
Brucellar Spondylitis	116

9. CONGENITAL DEFORMITIES	117
-------------------------------------	-----

A. Etiology

Genetic Factor	117
Factor of Embryonic Trauma	117
Teratogenesis	117

B. Upper Extremity

Congenital High Scapula	118
Cleidocranial Dysostosis	121
Congenital Anomalies of the Hand	122

9. CONGENITAL DEFORMITIES—(*Cont.*)

Congenital Absence of the Radius	124
Congenital Radio-ulnar Synostosis	125
Congenital Humeroradial Synostosis	125

C. Lower Extremity

Congenital Dislocation of the Hip	126
Congenital Clubfoot	137
Metatarsus Adductovarus	147
Congenital Hallux Varus	148
Congenital Overlapping Little Toe	149
Congenital Dislocation of the Knee	149
Congenital Coxa Vara	150
Congenital Pseudoarthrosis of the Tibia	152
Congenital Absence of the Fibula	154
Congenital Absence of the Tibia	155
Congenital Torsion in the Lower Extremity	156
Congenital Dislocation of the Patella	158
Multipartite Patella	159
Congenital Flatfoot	160
Congenital Angulation of the Tibia	161

D. The Spine

Congenital Torticollis	163
Klippel-Feil Syndrome	165
Congenital Absence of Spinal Segments	167

E. General Defects

Polydactylism	168
Amyoplasia Congenita	168
Congenital Constricting Bands	168
Congenital Hyperlaxity of Joints	169

10. DEVELOPMENT CONDITIONS 171

Osteogenesis Imperfecta	171
Chondro-osteodystrophy	175
Dyplasia Epiphysialis Multiplex	178
Dyplasia Epiphysialis Punctata	179
Osteopetrosis	180
Melorheostosis	183
Dyschondroplasia	184
Hereditary Multiple Exostoses	185
Achondroplasia	186
Osteopoikilosis	188
Engelmann's Disease	188

11. DISEASES OF JOINTS 191

Synovial Fluid	191
Classification of Diseases Affecting Joints	192
Degenerative Joint Disease	192
Rheumatoid Arthritis	197
Still's Disease	209
Palindromic Rheumatism	209

11. DISEASES OF JOINTS—(<i>Cont.</i>)	
Neuroarthropathy	211
Suppurative Arthritis	214
Gonorrheal Arthritis	216
Reiter's Syndrome	217
Hemophilic Arthritis	218
Traumatic Arthritis	220
Psoriatic Arthritis	221
Alterations in the Composition and the Function of Synovial Tissues Related to Tumor Formation	222
Pigmented Villonodular Synovitis	222
Hemangioma of a Joint	225
Osteochondromatosis	225
Synovioma	227
12. ORTHOPAEDIC NEUROLOGY	230
Anatomy of the Spinal Cord	230
Neurologic Diagnosis	235
Electromyography	241
Localization of Spinal Cord Lesion	242
Spinal Cord Tumors	243
Filum Terminale Syndrome	245
Spinal Muscular Atrophies of Unknown Etiology	246
Differential Diagnosis of the Muscle Atrophies	249
Peripheral Nerves	249
Individual Peripheral Nerves	256
Poliomyelitis	272
Guillain-Barré Syndrome	303
Cerebral Palsy	306
13. TUMORS OF BONE	321
Classification	321
Histogenesis	321
Osteoma	322
Osteochondroma	323
Chondroma	325
Chondrosarcoma	327
Chondromyxoid Fibroma	331
Chondroblastoma	332
Benign Giant Cell Tumor	333
Aneurysmal Bone Cyst	336
Unicameral Bone Cyst	338
Osteogenic Sarcoma	339
Osteoid Osteoma	344
Benign Osteoblastoma	346
Parosteal Osteoma	346
Ewing's Sarcoma	348
Fibrosarcoma	351
Reticulum Cell Sarcoma	353
Multiple Myeloma	355
Liposarcoma	357
Adamantinoma	358

13. TUMORS OF BONE—(<i>Cont.</i>)	
Chordoma	359
Hemangioma of Bone	361
Hemangio-endothelioma	363
Identification of Endothelial Tissues	364
14. SECONDARY TUMORS OF BONE	365
Direct Nonmetastatic Invasion From Contiguous Growths	366
Bone Metastases	366
Outline of Symptoms and Diagnosis	368
Outline of Pathology	370
The Primary Tumors	372
Treatment	378
15. DISEASES OF MUSCLE	380
Histopathology of Skeletal Muscle	380
Tumors of Skeletal Muscle	381
Cavernous Hemangioma of Striated Muscle	381
Traumatic Conditions of Muscle	382
Myositis Ossificans Progressiva	384
Anterior Tibial Syndrome	384
Ischemic Necrosis of Muscle	385
Myositis	386
Inflammatory Myositis of Unknown Etiology	389
Muscular Dystrophies	392
Muscular Fibrodystrophy	395
Congenital Myotonia	395
Family Periodic Paralysis	396
Amyoplasia Congenita	397
Myasthenia Gravis	397
16. FIBROUS DISEASES	400
Fibrous Dysplasia of Bone	400
Nonosteogenic Fibroma of Bone	406
Congenital Neurofibromatosis	407
The Collagen Diseases	411
17. UNCLASSIFIED DISEASES OF BONE	414
Paget's Disease	414
Infantile Cortical Hyperostosis	419
Sarcoidosis	421
Tumors of Hemopoietic Tissues	423
Reticulum Cell Sarcoma	433
Tumors Invading Bone From Overlying Structures	433
18. PERIPHERAL VASCULAR DISEASE	436
Diagnosis of Vascular Diseases of the Extremities	436
Special Tests of Peripheral Circulation	440
Arteriosclerosis Obliterans	446
Chronic Aorto-iliac Occlusion	449
Thromboangiitis Obliterans	451
Treatment of Chronic Occlusive Arterial Disease	453

18. PERIPHERAL VASCULAR DISEASE—(Cont.)	457
Angiospastic Conditions	457
Raynaud's Disease	458
Traumatic Arterial Spasm	459
Sudeck's Atrophy	460
Causalgia	462
Frostbite	464
Trench Foot and Immersion Foot	465
Pernio	466
Conditions Characterized by Vasodilatation	467
Acute Arterial Injuries	468
Arterial Aneurysm	472
Arteriovenous Fistula	476
Glomus Tumor	476
Periarthritis Nodosa	478
Therapeutic Sympathetic Paralysis	481
Technics of Sympathetic Blocks	484
Technic of Sympathectomy	489
Chemical Destruction of Sympathetic Ganglia	489
Anticoagulant Therapy	490
Differential Diagnosis of Arterial Obstruction in an Extremity	

PART THREE: REGIONAL ORTHOPAEDIC CONDITIONS

19. THE CERVICAL SPINE	495
Cervical Sprain	495
Cervical Disk	499
Degenerative Joint Disease of the Cervical Spine	508
Cervical Spinal Cord Injury	511
Chronic Cervical Spinal Cord Injury	514
Torticollis	516
Bony Abnormalities About the Craniovertebral Junction	519
20. CERVICOBRACHIAL REGION	525
Pathology of Cervicobrachial Compression	525
Cervical Rib	528
Scalenus Anticus Syndrome	531
Brachial Plexus Injuries	531
The Complete Traction Injury	535
Costoclavicular Syndrome	537
Hyperabduction Syndrome	537
Differential Diagnosis of Neurovascular Compression Syndromes	539
Classification of Disorders Producing Neurovascular Signs and Symptoms in the	
Upper Extremity	539
Obstetric Paralysis	540
21. THE SHOULDER	544
Surgical Anatomy	544
Arm-Trunk Mechanism	545
Examination of the Shoulder	547

21. THE SHOULDER—(<i>Cont.</i>)	
Lesions of the Rotator Cuff	549
Calcified Deposits in the Rotator Cuff	551
Biceps Tendon Lesions	553
The Frozen Shoulder	556
Dislocation of the Shoulder	559
Scapulocostal Syndrome	566
Snapping Scapula	567
Sternoclavicular Joint	568
Acromioclavicular Joint	570
Tuberculosis of the Shoulder	572
Visceral Causes of Shoulder Pain	573
22. THE ELBOW	574
Surgical Anatomy	574
Tennis Elbow	579
Elbow Sprain	580
Pulled Elbow	581
Recurrent Dislocation of the Elbow	581
Old Unreduced Dislocation of the Elbow	582
Rupture of the Biceps Insertion at the Elbow	583
Tuberculosis of the Elbow	583
Osteochondritis Dissecans of the Elbow	585
Myositis Ossificans in the Elbow	586
23. THE HAND	587
Surgical Anatomy	587
Reconstruction of the Hand	595
Thumb Tendons	610
Radial and Ulnar Subluxation of the Thumb	611
The Intrinsic Muscles	612
Treatment of Hand Injuries	619
Tendon Rupture	620
Dislocation of Tendon	621
Traumatic Tenosynovitis	622
Rheumatoid Arthritis of the Hand	622
Chronic Infection of the Hand	626
Dupuytren's Contracture	628
Calcific Deposits in the Hand and the Wrist	632
Congenital Arteriovenous Fistula	633
Benign Giant Cell Tumor of Tendon Sheath	634
24. THE WRIST	636
Surgical Anatomy	636
The Carpal Tunnel Syndrome	636
Ganglion	639
Rheumatoid Tenosynovitis About the Wrist	640
Madelung's Deformity	641
Degenerative Arthritis of the Lower Radio-ulnar Joint	643
Traumatic Necrosis and Degeneration of Carpal Bones	643
The Carpal Scaphoid: Nonunion and Aseptic Necrosis	645

24. THE WRIST—(<i>Cont.</i>)	
Sprain of the Pisiform-Triquetral Joint	647
Osteoarthritis of the Trapeziometacarpal Joint	647
25. THE HIP	649
Surgical Anatomy	649
Mechanics of the Hip Joint	663
Degenerative Joint Disease	665
Salvage Operations	676
Cup Arthroplasty	680
Degeneration of the Hip	682
Arthrodesis of the Hip	687
Femoral Head Prosthesis	688
Combined Femoral Head-Acetabular Prosthesis	691
Avascular Necrosis of the Femoral Head	693
Idiopathic Avascular Necrosis of the Femoral Head	694
Slipped Upper Femoral Epiphysis	697
Coxa Plana	704
Femoral Torsion	706
Osteotomy at the Hip	707
Pigmented Villonodular Synovitis (Xanthomatosis) of the Hip Joint	709
Transient Synovitis of the Hip	709
Calcified Tendinitis of the Hip Joint	710
Intrapelvic Protrusion of the Acetabulum	710
Bursitis About the Hip	711
Snapping Hip	713
Intermittent Claudication of the Hip	713
Tuberculosis of the Hip	713
26. THE KNEE	720
Surgical Anatomy	720
Semilunar Cartilages	727
Congenital Discoid Menisci	735
Calcification and Ossification of Menisci	736
Ligaments of the Knee	737
Ruptures of the Quadriceps Apparatus	748
Dislocation of the Patella	750
Chondromalacia Patellae	752
Hypertrophic Patella	753
Larsen-Johansson Disease of the Patella	757
Traumatic Prepatellar Neuralgia	759
Osteochondritis Dissecans	759
Osgood-Schlatter Disease	762
Deformity About the Knee	764
Genu Valgum	765
Genu Varum	768
Genu Recurvatum	770
Degenerative Joint Disease of the Knee	770
Tuberculosis of the Knee Joint	773
Bursae of the Knee Joint	777
Bursitis in Special Situations	779
Intraneural Cyst of the Common Peroneal Nerve	780

27. THE FOOT AND THE ANKLE	782
Surgical Anatomy	782
Ankle Sprain	794
Lesion of the Talar Dome	796
Degenerative Arthritis of the Ankle	798
Tuberculosis of the Ankle and the Foot	799
Stenosing Tenosynovitis at the Ankle	802
Rheumatoid Tenosynovitis About the Ankle	802
The Metatarsophalangeal Region	802
Metatarsalgia	803
Osteochondrosis of a Metatarsal Head	805
March Fracture	806
Plantar Digital Neuroma	807
Hallux Valgus	808
Hallux Varus	812
The Longitudinal Arch and Foot Strain	812
Flatfoot	813
Hypermobile Flatfoot	814
Tarsal Coalition	817
Osteochondrosis of the Tarsal Navicular	820
Sesamoid Bones of the Foot	821
Calluses	822
Warts	823
Hammer Toe	823
Ingrowing Toenail	824
Hallux Rigidus	824
Pain About the Heel	826
Plantar Fibromatosis	829
Accessory Bones of the Foot	830
28. THE BACK	834
Surgical Anatomy of the Nerve Roots in the Lower Lumbar Spine	834
Referred Pain From the Back	835
The Intervertebral Disk	835
Ruptured Intervertebral Disk	838
Central Protrusion of a Lumbar Intervertebral Disk	849
Warning Regarding Spinal Cord Tumors	850
Warning Regarding a Vascular Lesion	850
Lumbar Nerve Root Compression by an Exostosis	850
Lumbosacral Strain	852
Sprung Back	857
Thoracic Intervertebral Disk Herniation	858
Calcification of Intervertebral Disks	860
Infection of the Intervertebral Disk	861
Spondylolisthesis	862
Spina Bifida	869
Osteohistology of the Normal Vertebra	873
Adolescent Kyphosis	876
Localized Osteochondritis of the Lumbar Spine	878
Degenerative Joint Disease of the Spine	879
Factors Predisposing to Degenerative Arthritis of Spine	879
Marie-Strümpell Arthritis	882

28. THE BACK—(<i>Cont.</i>)	
Spondylitis of Rheumatoid Arthritis	887
Osteoporosis of the Spine	888
Tuberculous Spondylitis	889
Osteomyelitis of the Spine	898
Neuroarthropathy of the Spine	901
Fibrositis	902
Vertebra Plana	903
Aspiration Biopsy of Lesions of Vertebral Bodies	904
Posture: Normal and Abnormal	905
Scoliosis	909
Congenital Scoliosis; Hemivertebra; Wedged Vertebra	927
29. THE PELVIS	929
The Sacro-iliac Joint	929
Sacro-iliac Strain	930
Coccygodynia	930
Osteitis Pubis	932
Osteitis Condensans Ilii	933
Episacro-iliac Lipomas	934
Tuberculosis of the Sacro-iliac Joint	935

PART FOUR: SPECIAL SUBJECTS

30. RADIOACTIVE ISOTOPES IN ORTHOPAEDICS	941
The Nature of Isotopes	941
Radioactive Isotopes as Agents of Disease	947
Radioactive Isotopes as Tracers	949
Radioisotopes in the Diagnosis and the Treatment of Diseases	950
31. AMPUTATIONS	953
Indications for Amputation	953
Preoperative Preparation	953
Types of Amputation	953
Technic for Open Circular Amputation	953
Sites of Amputation	955
Principles of Amputation Technic (Slocum)	960
Amputation in the Presence of Peripheral Vascular Disease	961
Pathology of the Amputation Stump	962
Physical Rehabilitation of the Amputee	964

INDEX	969
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