

Patient Care Curriculum: Hand Surgery

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GENERAL TOPICS

- a. Anatomy/ Embryology
 - b. Imaging
 - c. Interpersonal Communication Skills
 - d. Practice Based Learning:
 Evidence-Based Medicine
 - e. Professionalism
 Medico-Legal Considerations
 - f. System Based Practice
 Practice Management
 Rehabilitation
 The Public Medical System (Medicare, Medicaid, VA)
-

DEFINITIONS

DISEASES/CONDITIONS

- * **BROAD** - A graduate should be able to care for all aspects of disease and provide comprehensive management (ie carpal tunnel syndrome).
- * **FOCUSED** - A graduate should be able to make the diagnosis, provide initial management/stabilization, but will not be expected to be able to provide comprehensive management (ie traumatic segmental defect of the median nerve).

OPERATIONS/PROCEDURES

- * **ESSENTIAL - COMMON** - Frequently performed operations in hand surgery; specific procedure competency is required by end of training and should be attainable primarily by case volume (ie carpal tunnel release).
- * **ESSENTIAL - UNCOMMON** - Rare, often urgent, operations seen in hand surgery practice and not typically done in significant numbers by trainees; specific procedure competency required by end of training but cannot be attained by case volume alone (ie repair of traumatic radial artery and median nerve lacerations).
- * **COMPLEX** - Not consistently performed by hand surgeons in training and not typically performed in hand surgery practice. Generic experience in complex procedures in residency is required but not competence in individual procedures. Some residency programs may provide sufficient experience for competence in some specific procedures (ie sensory nerve transfers for median nerve deficits).

SPECIFIC TOPICS

1. Amputations/ Finger tip injuries

DISEASES/CONDITIONS

BROAD

Diagnosis and Treatment of Nailbed Injury
Dx, Bx and Rx of pigmented lesions of the nail matrix
Dx, Bx and Rx of non-pigmented lesions of the nail matrix
Replantation (Principles, Practice)
Thumb MCP

FOCUSED

Prosthetics
Principles (incl. passive, myoelectric)
Targeted Innervation
Replantation (Principles)
Arm
Forearm
Wrist
TransMC
Thumb (CMC, MC, P1, IP, P2)
Digit (number; MC, MCP, P1, IP, P2)

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Nail and Nailbed
Excision
Repair
Revision
Revision amputation
Traumatic/Atraumatic Amputation
Ray
Digit

ESSENTIAL/UNCOMMON

Nail and Nailbed
Biopsy
Graft
Replantation (Practice)
Thumb MCP
Thumb Reconstruction
MC lengthening
Traumatic/Atraumatic Amputation
Transhumeral
Through Elbow
Forearm
Wrist
Transmetacarpal

COMPLEX

Replantation (Practice)
Arm
Forearm
Wrist

TransMC
Thumb (CMC, MC, P1, IP, P2)
Digit (number; MC, MCP, P1, IP, P2)
Thumb Reconstruction
Pollicization
Bone Graft + Flap
Wrap around
Great toe
Second toe
Traumatic/Atraumatic Amputation
Forequarter
Shoulder Disarticulation

2. Anesthesia, Pain Management

DISEASES/CONDITIONS

BROAD

Pain mechanisms, theory

Pharmacology/Mechanisms

- Local anesthetics

- NSAIDs

- Narcotics

- Anti-seizure medications

- Corticosteroids

CRPS 1, CRPS 2

- Medical management

- Surgical management

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Regional anesthesia

- Peripheral Nerve: LABCN, Radial, Median, Ulnar; Location

- Bier block

- Wrist block

- Digital bloc

ESSENTIAL/UNCOMMON

COMPLEX

Regional anesthesia

- Cervical

- Supraclavicular

- Infraclavicular

- Axillary

General anesthesia

Stellate ganglion block

3. Arthritis

DISEASES/CONDITIONS

BROAD

Location: Hand/CMC/Wrist/Ulnocarpal/DRUJ/Elbow/Shoulder

- MCP, PIP, DIP osteoarthritis
- MCP, PIP rheumatoid arthritis
- Swan-neck in rheumatoid
- Boutonniere's in rheumatoid
- Thumb deformity in rheumatoid
- Thumb CMC osteoarthritis
- Thumb STT arthritis
- Wrist arthritis
 - Rheumatoid
 - SLAC wrist
 - SNAC wrist
 - Isolated mid-carpal arthritis
 - Hamate arthritis +/- LT (HALT)
 - Radiolunate arthritis (inflammatory, gout, pseudogout)
 - DRUJ arthritis
 - Elbow arthritis
 - Radiocapitellar arthritis
 - Ulnohumeral arthritis
 - Combined
 - Acromioclavicular arthritis
 - Glenohumeral arthritis
 - Sternoclavicular arthritis

Etiology: Degenerative, Sero+, Sero-, Crystalline, Charcot, Septic (non-acute)

- Osteoarthritis
- Rheumatoid arthritis
- Post-traumatic arthritis
- Post-infectious arthritis
- Gout
- Pseudogout
- SLE related joint deformity
- Scleroderma related joint deformity
- Psoriatic arthritis
- Charcot arthropathy
- Chronic Sepsis (fungal, mycobacterial, bacterial)

Principles of Arthrodesis

Principles of Arthroplasty and soft tissue balancing

- Excision
- Interposition
- Implant

Principles of Osteotomy

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Corticosteroid injection (GH, AC, elbow, wrist, ulnocarpal, DRUJ, CMC, STT, MCP, PIP, DIP)

- Excision of tophus
- Excision of rheumatoid nodule
- Excision of mucous cyst
- Extensor tenosynovectomy
- Joint synovectomy (wrist, MCP)
- Arthrodesis
 - Glenohumeral arthrodesis
 - Complete wrist arthrodesis
 - Rheumatoid
 - Non-rheumatoid
 - Limited intercarpal arthrodesis
 - Radiocarpal (radio scapholunate) arthrodesis
 - Four-corner arthrodesis
 - STT arthrodesis
 - Full mid-carpal arthrodesis (scaphoid preservation)
 - 1st CMC arthrodesis
 - MCP arthrodesis
 - IP arthrodesis
- Arthroplasty
 - Implant
 - Total shoulder arthroplasty
 - Hemi-shoulder replacement arthroplasty
 - Total elbow arthroplasty
 - MCP arthroplasty
 - Rheumatoid arthritis
 - other
 - PIP arthroplasty
 - Osteoarthritis
 - other
 - Excision
 - Trapeziectomy +/- ligament reconstruction and interposition
 - Darrach
 - Distal ulna hemiresection
 - Proximal row carpectomy
 - Radial head excision
 - Acromioclavicular excision arthroplasty
- Osteotomy
 - Distal radius osteotomy for malunion
 - Extra-articular
 - Ulnar shortening osteotomy for ulnocarpal impaction
 - Excision of carpal boss
 - Radial styloidectomy

ESSENTIAL/UNCOMMON

- Arthrodesis
 - Ulnohumeral arthrodesis
 - Radioulnar arthrodesis
 - One-bone forearm
- Arthroplasty
 - Implant

- Reverse Total Shoulder arthroplasty
- Glenoid resurfacing arthroplasty, graft
- Humeral head resurfacing, graft
- Total wrist arthroplasty
- DRUJ arthroplasty
 - Ulnar head endoprosthesis
 - Total DRUJ replacement

Excision

- Sauve-Kapandji procedure
- Darrach salvage
- Feldon wafer procedure (open, arthroscopic) for ulnocarpal impaction
- Resection arthroplasty for MCP or IP joints in scleroderma
- Glenohumeral excision arthroplasty
- Sternoclavicular excision arthroplasty

Osteotomy

- Distal radius osteotomy for malunion
 - Intra-articular
- Thumb metacarpal osteotomy for early CMC arthritis

COMPLEX

4. Burns

DISEASES/CONDITIONS

BROAD

Thermal

Principles, Classification

Resuscitation

Chemical

Emergency treatment

Frostbite

Evaluation

Rewarming protocol

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Thermal

Escharotomy

Reconstruction

STSG, FTSG, other sources of cutaneum

ESSENTIAL/UNCOMMON

Thermal

Excision

Reconstruction

Syndactyly release

COMPLEX

5. Combined hand injuries

DISEASES/CONDITIONS

BROAD

Evaluation

FOCUSED

Organization

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

ESSENTIAL/UNCOMMON

Reconstruction

Capsulectomy

Tenolysis

COMPLEX

6. Compartment syndromes

DISEASES/CONDITIONS

BROAD

Acute compartment syndrome
 Hand (including CTS)
 Forearm
 Arm

FOCUSED

Venomous snake bite
Volkman's ischemic contracture

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Compartment pressure measurement
Fasciotomies of the hand, CTR
Fasciotomies of the forearm (volar, dorsal)
Fasciotomies of the arm

ESSENTIAL/UNCOMMON

Skin release
Z-plasty lengthening of tendons
 Muscle slide
 Tendon transfers

COMPLEX

External neurolysis of median and ulnar nerves
Innervated free muscle transfer

7. Congenital Conditions

DISEASES/CONDITIONS

BROAD

Classification

Neuromuscular Conditions

CP

Syndactyly

Supernumerary digit

Trigger Thumb

FOCUSED

Clinodactyly, Camptodactyly

Thumb hypoplasia

Radial club hand

Ulnar club hand

Polydactyly

Adactyly

Symbrachydactyly

Macroactyly

Acquired Growth Conditions

Madelung's

Physeal arrest

Neuromuscular Conditions

Arthrogryposis

Muscular Dystrophy

Brachial plexus birth palsy

Sprengels

Vascular anomalies

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Trigger thumb release

Excision supernumerary digit

ESSENTIAL/UNCOMMON

Syndactyly release, simple

COMPLEX

Syndactyly release, complex

Pollicization

Centralization

Cleft Hand reconstruction

Constriction band release

Madelung osteotomy (dome)

8. Contractures, Spasticity, Stiffness, Weakness

DISEASES/CONDITIONS

BROAD

CP/ Stroke/ TBI

Classification, Evaluation

Pathophysiology and Natural History

SCI/Myopathy

Classification, Evaluation

Post-Traumatic

Shoulder, Elbow, Wrist, CMC, MCP, IP

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Post-Traumatic

MCP, IP capsulectomy and joint release

Tenolysis

Arthrodesis

Arthroplasty

ESSENTIAL/UNCOMMON

CP/ Stroke/ TBI

Tendon Transfers

Muscle slide

Joint releases

Tenotomy, tendon lengthening

Arthrodesis

SCI/Myopathy

Tendon Transfers

Muscle slide

Joint releases

Tenotomy, tendon lengthening

Arthrodesis

Post Ischemia

Joint releases

Tenotomy

Arthrodesis

Post-Traumatic

Shoulder, Elbow, Wrist, CMC capsulectomy and joint release

Frozen shoulder, release (closed, arthroscopic)

COMPLEX

9. Dupuytren's

DISEASES/CONDITIONS

BROAD

Genetics and epidemiology

Associated conditions

Dupuytren's diathesis

Dupuytren's disease

- Nodules

- Cords

- Contractures

- Garrod's pads

- Peyronie's disease

- Ledderhose's disease

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Splinting or casting for contracture

Injection of nodule

Fasciotomy of Dupuytren's contracture

- Palm

- Finger

Fasciectomy of Dupuytren's contracture

- Palm

- Finger

Dermofasciectomy

- Palm

- Finger

Skin closure techniques

- Local flaps

 - Z-plasty

 - V to Y

- McCash technique

- Full Thickness skin grafting

PIP joint release

Microscopic nerve or vessel repair for iatrogenic injury

Amputation

- Ray

- With transposition

ESSENTIAL/UNCOMMON

Revision excision of Dupuytren's contracture with possible:

- Phalangeal shortening

- PIP replacement

- PIP arthrodesis

COMPLEX

- Collagenase injection treatment

Percutaneous release of cords

10. Fractures/ dislocations/ nonunions/ malunions

DISEASES/CONDITIONS

BROAD

Biology of bone healing

Principles of bone grafts

Autografts

Allografts

Bone substitutes

Fractures and Dislocations: Treatment Principles and Decision Making (open and closed)

Distal phalanx (thumb and digits)

DIP (and IP joint thumb)

Mallet finger

Bony mallet

Bony profundus avulsion

Middle phalanx

Condylar

Shaft

Proximal

PIP

Volar

Dorsal

Dorsal Fracture-Dislocation

Proximal Phalanx (thumb and digits)

Condylar

Shaft

Intraarticular (proximal)

Collateral Avulsions

MCP (thumb and digits)

Collateral ligament tears

Skier's thumb

Gamekeeper thumb

Acute RCL injury

Dorsoradial capsular strain

Metacarpal

Head

Neck

Shaft

Base

Baby Bennett

Bennett

Rolando

Trapezium

Tubercle

other

Trapezoid

Capitate

Waist

Scaphocapitate syndrome

Hamate

- Dorsal rim
- Hook
- Body
- Pisiform
- Triquetrum
 - Dorsal avulsion
 - LT avulsion
 - other
- Lunotriquetral ligament tear
- Lunate
- Scaphoid
 - Distal pole
 - Waist
 - Displaced
 - Undisplaced
 - Multifragmentary
 - Proximal pole
 - Associated with intercarpal ligament injury, dislocation
- Scapholunate ligament tear
- Distal Radius
 - Extra-Articular
 - Partial Articular
 - Volar Barton
 - Lunate Facet
 - Dorsal
 - Volar
 - Complete Articular
 - Associated with distal ulna instability
- DRUJ
 - Volar Dislocation
 - Dorsal Dislocation
- Distal Ulna
 - Styloid
 - Head
 - Neck
 - Complex
- Radius
 - Galeazzi
- Ulna
 - Monteggia
- Radius and Ulna
- Radial Head
 - Undisplaced
 - Displaced
 - Radial neck
- Coronoid Process
- Radio-Capitellar Joint
 - LUCL sprain
- Ulna-Humeral Joint
 - LUCL sprain

MCL tear

PRUJ

Humerus

Humeral head

Humeral neck

Surgical neck

Shaft

Supracondylar

Intercondylar Y, T, multifragmentary

Lateral condyle

Medial condyle

Glenohumeral joint

Anterior dislocation

Posterior dislocation

Inferior dislocation, Luxatio erecta

Acromioclavicular joint

Types 1 to 6

Scapulothoracic joint

Scapulothoracic dissociation

Vascular, plexus injuries

Sternoclavicular joint

Anterior dislocation

Posterior dislocation

Clavicle

Shaft

Associated AC separation

Scapula

Glenoid

Neck

Body

Principles of Pediatric Fractures

Specific Pediatric fractures

Salter classification

Seymour fracture

Salter 2 fracture of distal radius

Torus fractures

Greenstick fracture

Pediatric both-bone forearm fractures

Nonunions and Chronic Dislocations: Treatment Principles and Decision Making

Distal phalanx (thumb and digits)

DIP (and IP joint thumb)

Mallet finger (chronic)

Bony mallet

Middle phalanx

Condylar

Shaft

Proximal

PIP

Volar (Bony boutonniere)

- Dorsal (Chronic)
- Dorsal Fracture-Dislocation (Chronic)
- Proximal Phalanx (thumb and digits)
 - Condylar
 - Shaft
 - Intraarticular (proximal)
 - Collateral Avulsions
- MCP (thumb and digits)
 - Collateral ligament tears
 - Gamekeeper thumb
 - Chronic RCL injury
 - Dorsoradial capsular strain
- Metacarpal
 - Head
 - Neck
 - Shaft
 - Base
 - Baby Bennett
 - Bennett
 - Rolando
- Trapezium
 - Tubercle
 - other
- Trapezoid
- Capitate
 - Waist
 - Scaphocapitate syndrome
- Hamate
 - Dorsal rim
 - Hook
 - Body
- Pisiform
- Triquetrum
 - Dorsal avulsion
 - LT avulsion
 - other
- Lunotriquetral ligament tear (Chronic)
- Lunate
- Scaphoid
 - Distal pole
 - Waist
 - Displaced
 - Undisplaced
 - Multifragmentary
 - Proximal pole
 - Associated with intercarpal ligament injury, dislocation
- Scapholunate ligament tear (Chronic)
 - SLAC 1
 - SLAC 2
 - SLAC 3, 4

- Distal Radius
 - Extra-Articular
 - Partial Articular
 - Volar Barton
 - Lunate Facet
 - Dorsal
 - Volar
 - Complete Articular
 - Associated with distal ulna instability
- DRUJ
 - Volar Dislocation (Chronic)
 - Dorsal Dislocation (Chronic)
- Distal Ulna
 - Styloid
 - Head
 - Neck
 - Complex
- Radius
 - Galeazzi, w chronic DRUJ subluxation/dislocation
- Ulna
 - Monteggia, w chronic radial head subluxation/dislocation
- Radius and Ulna
- Radial Head
 - Undisplaced
 - Displaced
 - Radial neck
- Coronoid Process
- Radio-Capitellar Joint
 - LUCL sprain
- Ulna-Humeral Joint
 - LUCL sprain
 - MCL tear
- PRUJ
- Humerus
 - Humeral neck
 - Surgical neck
 - Shaft
 - Supracondylar
 - Intercondylar Y, T, multifragmentary
 - Lateral condyle
 - Medial condyle
- Glenohumeral joint
 - Anterior dislocation (Chronic)
 - Posterior dislocation (Chronic)
- Acromioclavicular joint
 - Types 1 to 6
- Scapulothoracic joint
 - Snapping scapula
- Sternoclavicular joint
 - Anterior dislocation (Chronic)

- Posterior dislocation (Chronic)
- Clavicle
 - Shaft
 - Associated AC separation
- Scapula
 - Glenoid
 - Neck
 - Body

Malunion

Intra- Articular, Extra- Articular

Pre-Operative planning

Specific malunions

- Rotational malunion of phalanx
- Rotational malunion of metacarpal
- Angular malunion of metacarpal
- Malunion of distal radius
 - Intra- Articular
 - Extra- Articular
- Ulnar shaft
- Radial shaft
- Humerus
- Clavicle

Principles of Fracture fixation (AO)

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Surgical/Nonsurgical Treatment of Acute/Subacute/Chronic Fractures and Dislocations

- Distal phalanx tuft fracture
 - Closed treatment
- Distal phalanx diaphyseal fracture
 - Closed treatment, reduction
 - Percutaneous K wire fixation
- Distal phalanx fracture into DIP joint
 - Closed treatment
 - Percutaneous K wire fixation
- Mallet fracture
 - Closed treatment
 - CRPP
 - Extension block pinning
 - ORIF
- FDP avulsion fracture
 - Open repair
- Middle phalanx condylar fracture
 - Closed treatment
 - CRPP
 - ORIF

Middle phalanx diaphyseal fracture
 Closed treatment
 CRPP
 ORIF
 External fixation
 Central slip avulsion fractures from middle phalanx base
 Closed treatment
 CRPP
 Extension block pinning
 ORIF
 Pilon (total articular fractures of base middle phalanx)
 Closed treatment
 CRPP
 External fixation
 Fixed
 Dynamic
 ORIF
 Volar plate avulsions/dorsal PIP fracture dislocations
 Closed treatment
 CRPP
 External fixation
 Fixed
 Dynamic
 Extension block K wire fixation
 ORIF
 Volar plate arthroplasty
 Hemi-hamate arthroplasty
 PIP dislocation
 Closed reduction
 Open reduction
 Proximal Phalanx condylar fracture
 Closed treatment
 CRPP
 ORIF
 Proximal Phalanx diaphyseal fracture
 Closed treatment
 CRPP
 ORIF
 External fixation
 Base of proximal phalanx fractures into MCP joint
 Associated with collateral ligament avulsion
 Closed treatment
 ORIF
 Repair of collateral ligament to site
 Associated with dorsal/volar dislocation; Intraarticular
 Closed treatment
 ORIF
 MCP dislocation
 Closed reduction
 Open reduction for complex dislocation, volar and dorsal

Metacarpal head fractures

Closed treatment

ORIF

Metacarpal neck fractures

Closed treatment

CRPP

Crossed in shaft, bouquet, into adjacent MC's

ORIF

Metacarpal diaphyseal fractures

Closed treatment

CRPP

Crossed in shaft, bouquet, into adjacent MC's

ORIF

Metacarpal base fracture/dislocation CMC/ Bennett/ Baby Bennett/ Rolando

Closed treatment

CRPP

Into fragments, across CMC joints into carpus/adjacent MC's

ORIF

Repair/reconstruct anterior oblique ligament for thumb CMC

Traction

Trapezium

Tubercle

Body

CRPP

ORIF

Trapezoid fracture

CRPP

ORIF

Capitate

Waist ORIF

Scaphocapitate syndrome ORIF

Hamate

Dorsal rim

CRPP

ORIF

Hook

Closed Rx

Excision

Body

Closed Rx

ORIF

Pisiform

Closed Rx

Excision

Triquetrum

Dorsal avulsion

LT avulsion

Direct repair

CRPP

other

- Lunotriquetral ligament tear
 - CRPP
 - Open reduction and pinning
 - Ligament reconstruction
 - Closed treatment
 - Limited arthrodesis
- Lunate
 - ORIF
- Scapholunate ligament tear
 - CRPP
 - Open reduction and pinning w/wo direct suture
 - Ligament reconstruction
 - Capsulodesis
 - Limited arthrodesis
- Scaphoid
 - Distal pole
 - Closed Rx
 - Excision
 - Waist
 - Displaced
 - ORIF
 - Undisplaced
 - ORIF
 - Closed Rx
 - Multifragmentary
 - ORIF
 - Proximal pole
 - ORIF
 - ORIF w Vascularized Graft
- Associated with intercarpal ligament injury, dislocation
 - ORIF
 - CRPP
- Distal Radius
 - Extra-Articular
 - Closed reduction and casting
 - CRPP
 - ExFix
 - ORIF
 - Volar
 - Dorsal
 - Combined
 - Partial Articular
 - Volar Barton
 - ORIF
 - Volar
 - Lunate Facet
 - Dorsal
 - ORIF
 - Volar
 - ORIF

- Complete Articular
 - Closed reduction and casting
 - CRPP
 - ExFix
 - ORIF
 - Volar
 - Dorsal
 - Combined
- Associated with distal ulna instability
 - Fixation ulnar styloid
- DRUJ
 - Volar Dislocation
 - Open reduction
 - Closed reduction
 - Dorsal Dislocation
 - Open reduction
 - Closed reduction
- Distal Ulna
 - Styloid
 - ORIF
 - CRPP
 - Head
 - ORIF
 - CRPP
 - Closed treatment
 - Neck
 - ORIF
 - CRPP
 - Excision
 - Complex
 - ORIF
 - CRPP
 - Closed treatment
 - Excision
- Radius
 - Galeazzi
 - ORIF
 - Reduction of DRUJ (open or closed)
- Ulna
 - Monteggia
 - ORIF
 - Reduction of radial head (open or closed)
 - Annular ligament reconstruction
- Radius and Ulna
 - ORIF
 - IM nails
 - Closed treatment
- Radial Head
 - Undisplaced
 - Closed treatment

- Displaced
 - ORIF
 - Fragment excision
 - Excision and arthroplasty
- Radial neck
 - ORIF
 - Excision and arthroplasty
- Coronoid Process
 - ORIF
- Radio-Capitellar Joint
 - LUCL sprain
 - Repair
 - Reconstruction
- Ulna-Humeral Joint
 - LUCL sprain
 - Repair
 - Reconstruction
 - MCL tear
 - Closed treatment
 - Open repair
- PRUJ
 - Open reduction
- Humerus
 - Humeral head
 - ORIF
 - Arthroplasty
 - Hemiarthroplasty
 - Closed treatment
 - Humeral neck
 - ORIF
 - CRPP
 - Arthroplasty
 - Hemiarthroplasty
 - Closed treatment
 - Surgical neck
 - ORIF
 - Arthroplasty
 - Shaft
 - Closed treatment
 - ORIF
 - IM Nail
 - Supracondylar
 - CRPP
 - ORIF
 - Arthroplasty
 - Intercondylar Y, T, multifragmentary
 - ORIF
 - Arthroplasty
 - Lateral condyle
 - ORIF

- Closed treatment
- Medial condyle
 - ORIF
 - Closed treatment
- Glenohumeral joint
 - Anterior dislocation
 - Closed reduction
 - Open reduction with soft tissue repair
 - Arthroplasty
 - Arthrodesis
 - Posterior dislocation
 - Closed reduction
 - Open reduction with soft tissue repair
 - Arthroplasty
 - Arthrodesis
 - Inferior dislocation, Luxatio erecta
 - Closed reduction
 - Open reduction with soft tissue repair
- Acromioclavicular joint
 - Types 1 to 6
 - Closed treatment
 - Open reduction and ligament reconstruction
- Scapulothoracic joint
 - Scapular ostectomy
 - Tendon transfers for snapping scapula
- Sternoclavicular joint
 - Anterior dislocation
 - Open reduction
 - Closed treatment
 - Posterior dislocation
 - Open reduction with thoracic/vascular/cardiac support
- Clavicle
 - Shaft
 - Closed treatment
 - IM Nail
 - ORIF w/wo ICBG
 - Associated AC separation
 - ORIF
- Scapula
 - Glenoid
 - ORIF
 - Closed treatment
 - Neck
 - ORIF
 - Closed treatment
 - Body
 - ORIF
 - Closed treatment

ESSENTIAL/UNCOMMON

COMPLEX

11. Infections/ Bites

DISEASES/CONDITIONS

BROAD

Microbiology and pathology of human bites
Microbiology and pathology of dog bites
Microbiology and pathology of cat bites
Microbiology and pathology of snake bites
Microbiology and pathology of spider bites
Microbiology and pathology of bites of other animals
Microbiology and pathology of viral (Herpetic) infection
Microbiology and pathology of Sporothrix infections
Microbiology and pathology of tick bites

Microbiology

- Gram positive organisms
- Gram negative organisms
- Fungi
- Mycobacteriae
- Viruses
- Rickettsiae

Diagnosis and Treatment

- Cellulitis
- Abscess
- Acute paronychia
- Chronic paronychia
- Herpetic whitlow
- Septic flexor tenosynovitis
- Mycobacterial/chronic flexor tenosynovitis
- Radial/ulnar bursal infections
- Deep space infections
- Septic arthritis
 - Interphalangeal joint
 - Metacarpophalangeal joint
 - Septic boutonnière deformity
 - Septic Wrist
 - Septic Elbow
 - Septic Glenohumeral joint
 - Septic Sternoclavicular joint

Osteomyelitis

- Dog bites
- Cat bites
- Infections from marine organisms
- Human bites
- Spider bites
- Infections from parenteral drug use
- Pyogenic granuloma
- Retained foreign bodies
- Infected olecranon bursitis

FOCUSED

Staphylococcal scalded skin syndrome

Necrotizing fasciitis/gas gangrene

Diagnosis and Treatment

Prosthetic implant infections

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Drainage of a felon

Drainage of an acute paronychia

Eponychial marsupialization

Irrigation of tendon sheath for acute septic flexor tenosynovitis

Incision and drainage of bursal infection

Incision and drainage of a deep space infection

Arthrotomy for septic arthritis

DIP joint

PIP joint

MP joint

Arthroscopic irrigation and debridement for septic arthritis

Wrist

Elbow

Shoulder

Debridement of osteomyelitis

Curettage

Sequestrectomy

Saucerization

Diaphysectomy

Excision of retained foreign bodies

Olecranon bursectomy

Olecranon ostectomy

12. Injection/ Extravasation

DISEASES/CONDITIONS

BROAD

Principles of treatment of injection injuries

Oil-based

Paint-based

Water

Air

Principles of treatment of extravasation injuries

Chemotherapeutics

Anti-epileptics

Saline

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Irrigation, drainage and debridement of injection injuries

Amputation

Ray resection

Decompression and irrigation of extravasation injuries

ESSENTIAL/UNCOMMON

Graft or flap coverage of defects following extravasation

COMPLEX

13. Instability

DISEASES/CONDITIONS

BROAD

Biology and biomechanics of dense regular connective tissues

- Ligament

- Tendon

- Tendon-Bone interface

Biology and biomechanics of Muscle

The shoulder and elbow of the throwing athlete

Specific instabilities

- Interphalangeal joint collateral ligament laxity

- Locked metacarpophalangeal joint

- Metacarpophalangeal joint collateral ligament laxity

- Metacarpophalangeal joint volar plate avulsion

- Carpometacarpal joint instability

 - Ring and small finger

 - Thumb

- Scapholunate ligament instability

 - Occult (Predynamic)

 - Dynamic

 - Static

 - DISI

 - SLAC

- Lunotriquetral joint instability

 - Acute, dynamic

 - Chronic dynamic

 - Static

 - Acute perilunate instability

 - Chronic perilunate instability

 - Degenerative ulnocarpal abutment

- Ulnar translocation of the carpus

- Midcarpal instability

- Carpal instability adaptive

 - Intraarticular/extraarticular malunion of the distal radius

- Carpal instability Complex

 - Dorsal perilunate dislocation (lesser arc)

 - Dorsal perilunate fracture-dislocation

 - Palmar perilunate dislocation

 - Axial dislocation

 - Isolated carpal dislocation

- Essex-Lopresti injury

- Radioulnar dissociation

- DRUJ instability

- Elbow instability

 - MCL tear (chronic)

 - LUCL tear (chronic) (posterolateral rotary instability)

- Shoulder instability

 - Anterior (labral tear)

 - SLAP lesion

- Inferior
Multidirectional instability
- AC joint instability
 - Grade II/III
- Sternoclavicular joint dislocation
- Scapulothoracic instability

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Principles and practice of diagnostic arthroscopy

- Wrist

- Elbow

- Glenohumeral joint

Proximal interphalangeal joint

- Arthrodesis

- Arthroplasty

Reduction of a CMC joint dislocation

- Open

- Closed

Thumb CMC volar ligament reconstruction (Eaton)

Wrist arthroscopy

- Diagnostic evaluation

- Radiocarpal

- Midcarpal

Ulnar shortening osteotomy

Lunotriquetral ligament

- Dorsal capsulodesis

- Lunotriquetral ligament repair

- Intercarpal arthrodesis

- LT

- CHLT

- Proximal row carpectomy

Scapholunate ligament

- Dorsal capsulodesis

- Scapholunate ligament repair

- Intercarpal arthrodesis

- Proximal row carpectomy

- Total wrist arthrodesis

Ulnar styloid ORIF

Glenohumeral instability

- Open Anterior reconstruction

- Open posterior reconstruction

- Arthroscopic anterior reconstruction

- Arthroscopic posterior reconstruction

- Reconstruction for MDI

- Treatment of Hill Sachs lesion, reverse Hill Sachs lesion

- Repair of SLAP lesion

Scapulothoracic fusion

ESSENTIAL/UNCOMMON

Principles and practice of diagnostic arthroscopy

Thumb CMC joint

MCP joints

Glenohumeral instability

Treatment of glenoid insufficiency

Proximal interphalangeal joint

Hemiamate arthroplasty

Collateral ligament repair

Collateral ligament reconstruction

Wrist arthroscopy

Arthroscopic TFCC debridement/repair

Lunotriquetral ligament

Lunotriquetral ligament reconstruction

Scapholunate ligament

Scapholunate ligament reconstruction

Intercarpal arthrodesis

STT

SC

Midcarpal stabilization

Dorsal capsulodesis

CHLT arthrodesis

Intraarticular/extraarticular distal radius osteotomy

Open reduction of a complete perilunate dislocation

Interosseous (radioulnar) reconstruction

DRUJ

Ligament reconstruction

Berger

Hui-Linscheid

Arthrodesis (Sauve Kapanji)

MCL of elbow repair/reconstruction

LUCL of elbow repair/reconstruction

Coracoclavicular ligament reconstruction

Scapulothoracic arthrodesis

COMPLEX

14. Medical Conditions

Diabetes Mellitus

Vasculitides

Polyarteritis nodosa

Thromboangiitis obliterans/Buerger's disease

Raynaud's syndrome

Churg-Strauss disease

Scleroderma/CREST syndrome

Wegener's granulomatosis

Kawasaki disease, Takayasu arteritis, Giant cell arteritis

Sickle cell anemia

Seropositive arthritides

RA/JRA

Seronegative arthritides

Osteoarthritis

Seronegative RA/JRA

Gout

CPPD

Septic arthritis

Psoriatic arthritis

SLE

Scleroderma

Reiter's syndrome

Inflammatory bowel disease/enteropathic arthropathy

Hemochromatosis

Neurologic disease

Cerebral Palsy

Multiple sclerosis

Charcot Marie Tooth

Amyotrophic lateral sclerosis, Guillain Barre, Myasthenia gravis

Pharmacology

Antibiotics

Corticosteroids

NSAIDs

Cox2 inhibitors

Acetaminophen

Ketorolac

Opioids/narcotics

Local anesthetic agents

Sedation agents

Antihypertensive agents

Thyroid medications

Cholesterol lowering agents

Insulin

Oral hypoglycemic agents

Tricyclic antidepressants

Gabapentin and Lyrica

Anticoagulant agents

Hypertension

Hypothyroidism
Hypercholesterolemia
Coronary artery disease
Renal disease
Peripheral Vascular Disease
Ehlers Danlos syndrome
Fibromyalgia

15. Osteonecrosis

DISEASES/CONDITIONS

BROAD

Lunate AVN – Kienbock’s disease

Scaphoid AVN – Preiser’s disease

Capitate AVN

Metacarpal head AVN

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Lunate

Cast immobilization

Radial shortening osteotomy

Scaphoid excision and four corner fusion

Proximal row carpectomy

Wrist arthrodesis

Scaphoid

Cast immobilization

STT fusion

Scaphoid excision and four corner fusion

Proximal row carpectomy

Wrist arthrodesis

Capitate

Cast immobilization

Midcarpal arthrodesis

Wrist arthrodesis

Metacarpal Head

Cast immobilization

Curettage and bone graft

MCP arthrodesis

ESSENTIAL/UNCOMMON

Lunate

Ulnar lengthening osteotomy

Capitate shortening osteotomy

Capitate-hamate arthrodesis

Core decompression

Wrist denervation

Scaphoid

Core decompression

Wrist denervation

Capitate

Capitate head resection arthroplasty

Capitate-hamate arthrodesis

Core decompression

Wrist denervation

Metacarpal Head

MCP arthroplasty

COMPLEX

Lunate

- Radial dome osteotomy

- Vascularized graft

Scaphoid

- Vascularized graft

Capitate

- Vascularized graft

Metacarpal head

- Metacarpal flexion osteotomy

16. Peripheral Nerve

DISEASES/CONDITIONS

BROAD

Neuroanatomy

- Brain
- Spinal Cord
- Brachial Plexus
- Peripheral Nerve
- Nerve endings

Neurobiology

- Normal
- Abnormal
 - Compression
 - Laceration
 - Repair
 - Grafting
 - Transfers
 - Motor
 - Sensory

Compression syndromes

- Medial nerve
 - Carpal tunnel syndrome
 - Pronator syndrome
- Ulnar nerve
 - Cubital tunnel syndrome
 - Guyon canal compression
- Radial nerve
 - Radial tunnel syndrome
 - Wartenberg's syndrome
 - PIN compression
- Axillary nerve
 - Quadrilateral space
- Suprascapular nerve
 - Notch
 - Spine
- Musculocutaneous nerve
 - Motor
 - LABCN

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Compressions

- Median
 - Carpal tunnel release, open
 - Redo open carpal tunnel release
- Ulnar
 - Ulnar nerve in situ decompression, open

- Ulnar nerve transposition, subcutaneous
- Ulnar nerve transposition, intramuscular
- Ulnar nerve transposition, submuscular
- Radial
 - Decompression of superficial sensory branch
 - Radial tunnel release
- Injury and repair
 - Digital
 - Digital nerve primary repair
 - Peripheral nerve
 - Primary repair of major peripheral nerve (median, radial, ulnar)
- Neuromas
 - Neuroma excision, transposition and burial of nerve in bone, muscle
- Reconstruction
 - Nerve autograft harvest, sural
- Tendon Transfers
 - Radial
 - PT to ECRB, FCR to EDC, PL to EPL
 - PT to ECRB, FCU to EDC, PL to EPL
 - PT to ECRB, FDS4 to EPL and EIP, FDS3 to EDC
 - Median
 - Low (opponensplasties)
 - Huber (ADQ)
 - FDS
 - EIP
 - Camitz (PL)
 - High
 - BR to FPL
 - FDP side-to-side
 - ECRL to FDP
 - Ulnar
 - Low
 - EIP to adductor pollicis
 - ECRB or BR plus tendon graft to adductor pollicis
 - FDS to adductor pollicis
 - Static tenodesis with graft to prevent MCP hyperextension
 - Modified Stiles-Bunnell (FDS) for clawing
 - Insertion: Zancolli lasso, proximal phalanx, or LB
 - FCR, ECRL, BR, or ECRB elongated with graft, for clawing
 - Insertion: Zancolli lasso, proximal phalanx, or LB
 - High
 - FDP side-to-side
 - Median + Ulnar: Low
 - Opponensplasty
 - FDS or EIP
 - Plus anti-clawing procedure
 - Static or active, noted above under low ulnar nerve palsy, with radial innervated donor MTU (ECRL, ECRB, BR)
 - Plus transfer to adductor pollicis for pinch, noted above under low ulnar nerve palsy (ECRL, BR, ECRB)

Median + Ulnar: High

- Opponensplasty (EIP)
- Static anti-clawing procedure
- BR to adductor pollicis (with graft)
- ECRL to FDP

ESSENTIAL/UNCOMMON

Compressions

Median

- Carpal tunnel release, endoscopic
- Forearm release for pronator syndrome

Injury and repair

Digital

- Digital nerve repair with nerve graft, allograft
- Digital nerve reconstruction with nerve graft, autograft

Peripheral nerve

- Reconstruction of major peripheral nerve (M, R, U) with autograft
- Internal microneurolysis of major peripheral nerve (M, R, U)

Nerve Transfers

Motor

- AIN to deep motor branch of ulnar nerve
- Radial (ECU, EDQ branch) to deep motor branch of ulnar nerve
- Ulnar nerve (FCU, PL, or FCR) to AIN, or ulnar nerve to MN
- Median nerve (FCR, FDS, PL branch) to radial nerve (ECRB and PIN)

Sensory

- 3rd web portion of median to 1st web portion of median
- 4th web portion of ulnar to 1st web portion of median
- DCU to 1st web portion of median

Neuromas

- Reconstruction of neuroma with restoration of nerve continuity using autograft, allograft, or nerve tube

Reconstruction

- Major peripheral nerve reconstruction with cable grafts (M, R, U)
- Nerve autograft harvest, MABC
- Nerve autograft harvest, LABC
- Nerve autograft harvest, AIN
- Nerve Tubes (nerve tube reconstruction of neuroma or of digital nerve)

Tendon Transfer

Musculocutaneous

- Steindler flexorplasty
- Latissimus transfer for elbow flexion with fascia lata graft
- Pectoralis major transfer

Bipolar

- Unipolar with fascia lata graft

Accessory Nerve (CN11)

Suprascapular (SS+IS, SS only)

COMPLEX

Brachial Plexus

- Exploration of brachial plexus
- Intraplexal direct repair
- Intraplexal nerve grafting
- Intraplexal nerve transfer
- Extraplexal nerve transfers
 - SA to suprascapular
 - Intercostal to musculocutaneous
 - Intercostal sensory to median
 - Single or double fascicular transfer (Oberlin)
 - Triceps to axillary
 - Contralateral C7 to median
 - Free functioning muscle transfer (gracilis)

Reconstruction

- Allografts (axogen allograft reconstruction of neuroma or of digital nerve)
- Vascularized ulnar nerve graft for median neurotization

Tendon Transfer

- Musculocutaneous
 - Free functioning gracilis transfer

17. Psychological Aspects of Upper Extremity Conditions

Diagnosis

Malingering

Factitious disorders

Conversion Reaction

Psychologic Disorders

Depression

Anxiety

Substance abuse

 Outside of medical/surgical care

 Pain medication abuse/dependence

Post-traumatic stress disorder

Hypochondriasis

Factitious disorders

Factitious lymphedema

Factitious ulceration

Secretan's (dorsal hand trauma self-inflicted)

Dysfunctional posturing

18. Soft Tissue Defects

DISEASES/CONDITIONS

BROAD

Biology of Wounds and Wound Healing

Skin grafts

Skin flaps

Principles of Microsurgery

Equipment

Set-Up

Principles of Transplantation

Principles of immunology relevant to composite allograft transplantation

Immunosuppressants

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Split and Full-thickness grafts: auto

VAC

Flaps

Local

Random (transposition, Limberg, peninsular, bipeninsular, rotation)

Axial

Distant

Random (Abdomen, chest)

Axial (Groin)

Named: flag, kite, Moburg, Atasoy, Kutler, Brand, reverse adipofascial, cross finger, reverse cross finger

Lower Extremity Coverage

Gastrocnemius

ESSENTIAL/UNCOMMON

Flaps

Local

Island (PIA, RFFF, RPRFF)

Free Tissue Transfer

Fasciocutaneous (Lateral arm, Anterolateral thigh, temporoparietal)

Myocutaneous (Latissimus, Gracilis, Rectus Abdominis)

Muscle (Latissimus, Gracilis, Rectus Abdominis)

Osseous (Fibula)

Lower Extremity Coverage

Soleus

COMPLEX

Split and Full-thickness grafts: allo, xeno

Flaps

Axial

Named: Neurovascular island, reverse MC artery island

Free Tissue Transfer

Osteocutaneous (Fibula)
Composite (hallux, wrap around, second toe, multiple toes, dorsalis pedis)
Lower Extremity Coverage
Perforator, Cross Leg, Free Flap, Reverse Sural

19. Tendon: Atraumatic conditions (tenosynovitis)

DISEASES/CONDITIONS

BROAD

Biology

Principles of rehabilitation

 Muscle physiology

 Exercise physiology

 Splinting

 Modalities

Shoulder

 Rotator Cuff

 Tendinopathy

 Small tears

 Large tears

 Massive tears

 Subscapularis tears

 Impingement

 Internal

 External

 Subcoracoid

 Biceps

 Tendinitis

 Labrum

 SLAP tear

Elbow

 Biceps tendinitis/tenosynovitis

 Triceps tendinitis/tenosynovitis

 LTES

 MTES

 Olecranon bursitis

Extensor forearm/hand

 AbPL/EPB tendinitis/tenosynovitis (DeQuervain's)

 EPL tendinitis/tenosynovitis

 EDC tendinitis/tenosynovitis

 EDQ tendinitis/tenosynovitis

 ECU tendinitis/tenosynovitis

 Swan neck/Boutonniere

 Traumatic

 Atraumatic

 Fixed

 Flexible

Flexor forearm/Hand

 FCR

 FCU

 Carpal tunnel

 Trigger

 Flexor tendinitis/tenosynovitis

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Shoulder

Rotator Cuff

Tendinopathy

Small tears (repair open, arthroscopic)

Large tears (repair open, arthroscopic)

Massive tears (repair open, arthroscopic, muscle transfers)

Subscapularis tears (repair open, arthroscopic)

Impingement

Internal (decompression open, arthroscopic)

External (decompression open, arthroscopic)

Subcoracoid (decompression open, arthroscopic)

Biceps

Tenotomy

Tenodesis

Labrum

SLAP repair

Elbow

Biceps debridement

Triceps debridement

LTES debridement. reattachment

MTES debridement. reattachment

Olecranon bursa excision

Extensor forearm/hand

DeQuervain's release

EPL transpositionn

EDC tenosynovectomy

EDQ transpositionn

ECU tenosynovectomy, transposition

Swan neck/Boutonniere

Release

Reconstruction

Arthroplasty

Arthrodesis

Flexor forearm/Hand

FCR tunnel release

FCU debridement

Carpal tunnel tenosynovectomy

Trigger finger release

Flexor tenosynovectomy

ESSENTIAL/UNCOMMON

COMPLEX

20. Tendon: Traumatic Conditions

DISEASES/CONDITIONS

BROAD

Biology

- Dense regular connective tissue healing, nutrition

- Biomechanics of tendon repair

Principles of rehabilitation

- Biology

- Methods

- Splinting

Shoulder

- Rotator Cuff

 - Tendinopathy

 - Small tears (repair open, arthroscopic)

 - Large tears (repair open, arthroscopic)

 - Massive tears (repair open, arthroscopic, muscle transfers)

 - Subscapularis tears (repair open, arthroscopic)

Elbow (Biceps, triceps; extensor origin, flexor origin)

- Repair

- Rehabilitation

Extensor forearm/hand

- Swan neck/Boutonniere/mallet

- Zones of injury

- Repair, rehabilitation

Flexor forearm/Hand

- Repair (Zone 1, Zone 2, other)

- Graft (intrasynovial, extrasynovial)

- Tenolysis

- Reconstruction (silastic rod, grafting, lysis)

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Shoulder

- Rotator Cuff

 - Small tears (repair open, arthroscopic)

 - Large tears (repair open, arthroscopic)

 - Massive tears (repair open, arthroscopic, muscle transfers)

 - Subscapularis tears (repair open, arthroscopic)

Elbow (Biceps, triceps; extensor origin, flexor origin)

- Repair

Extensor forearm/hand

- Swan neck/Boutonniere/mallet repair

- Zones of injury 1 to 8 repair and immobilization

- Repair

Flexor forearm/Hand

- Repair (Zone 1, Zone 2, Zones 3, 4, 5)

ESSENTIAL/UNCOMMON

Flexor forearm/Hand

Graft (intrasynovial, extrasynovial)

Tenolysis

Reconstruction (silastic rod, grafting, lysis)

COMPLEX

21. Trauma, Critical Care

ATLS/PALS

Penetrating Trauma

Principles of resuscitation

Nerve care

Fracture care

Extremity care, including decompressive fasciotomy

22. Tumors

DISEASES/CONDITIONS

BROAD

Skin/soft tissue/ nerve/vascular/bone and joint

Classification

Individual Diagnoses

SKIN

- Basal Cell Carcinoma
- Bowen's Disease
- Dermatofibroma/Histiocytoma
- Digital fibrokeratoma/Acral fibrokeratoma
- Glomus Tumor
- Keratoacanthoma/Distal digital keratoacanthoma
- Keratosis
- Lentiginosities
- Lymphangiosarcoma
- Melanocytic nevi/Moles
- Melanoma
- Merkel Cell Carcinoma
- Pyogenic granuloma
- Seborrheic keratosis
- Squamous Cell Carcinoma
- Sweat gland tumors
- Warts/Verruca vulgaris

SOFT TISSUE/BONE:

- Aneurysmal Bone Cyst
- Angiosarcoma
- Carpometacarpal boss
- Chondroblastoma
- Chondrosarcoma
- Clear Cell Sarcoma
- Dermatofibrosarcoma Protuberans
- Desmoids
- Enchondroma, Multiple enchondromatosis (Ollier), Maffucci's
- Epidermal Inclusion cyst
- Epithelioid Sarcoma
- Ewing's Sarcoma
- Fibromatosis
- Fibrosarcoma
- Fibrous Dysplasia
- Ganglion cyst (Volar, dorsal, radial, ulnar)
- Giant Cell tumor
- Giant Cell tumor of tendon sheath (PVNS)
- Granular Cell tumor
- Leiomyosarcoma
- Lipomas
- Lipofibromatous Hamartomas
- Liposarcoma
- Lymphoma of bone

Malignant Fibrous Histiocytoma
Metastatic lesions
Mucous cyst
Myeloma
Neurofibromas
Neurofibrosarcoma/Malignant Schwannoma
Nodular fasciitis/Dupuytren's/Diabetic fibromatosis
Osteoblastoma
Osteochondroma, BPOP, Subungual Exostosis
Osteogenic Sarcoma
Osteoid Osteoma
Periosteal chondroma
Rhabdomyosarcoma
Schwannomas/Neurilemomas
Synovial Sarcoma
Unicameral Bone Cyst

FOCUSED

Biopsy: superficial, deep

Skin
Muscle
Nerve
Bone

Excision

Benign, malignant, metastatic
Superficial, deep
Size
Skin, Muscle, Nerve, Vascular, Bone, Cartilage, Mesenchymal (see list below)
Location (Hand/Wrist/Forearm/Elbow/Arm/Shoulder)

Reconstruction

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Amputation
Curettage and bone grafting

ESSENTIAL/UNCOMMON

Curettage and cementation
Curettage and cryotherapy
Incisional and Excisional biopsy
Skin grafting

COMPLEX

Mohs' micrographic surgery
Wide excision and reconstruction

23. Vascular conditions

DISEASES/CONDITIONS

BROAD

Acute occlusive disease

Thrombus

Embolus

Chronic occlusive disease

Atherosclerotic disease

Buerger's

Scleroderma

Dermatomyositis

Thrombophlebitis

Septic thrombophlebitis

Trauma

Laceration

Large vessel (A, V)

Small vessel (A, V)

Aneurysm

Large vessel (A, V)

Small vessel (A, V)

Vascular malformations

Adult

Arteriovenous malformation

Venous malformation

Hemangioma

Lymphatic malformation

Vasospasm, Raynauds

Medical treatment

Surgical treatment

Frostbite

FOCUSED

Angioplasty

Fogarty Catheterization

Indications

Vascular malformation

Congenital

Thoracic outlet syndrome (Dx methods)

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Repair laceration large artery

Repair laceration large vein

Vein graft artery laceration

Vein graft vein laceration

Repair aneurysm large artery

Repair aneurysm small artery

Excision aneurysm small artery

Excision vascular mass

ESSENTIAL/UNCOMMON

Palmar sympathectomy

Digital sympathectomy

COMPLEX

Sources:

- 1) Textbook of Hand Surgery (Weiss, Burger)
- 2) ASSH Pocket Manual of Hand Surgery TOC (Hammert, Calfee, Bozentka, Boyer)
- 3) JHS Review Article TOC for three-year cycle (Scott Kozin)
- 4) Fellowship Case Log Categories
- 5) Trumble group code Categories for Hand Fellowship Case Log
- 6) Steyers et al, JHS(A) 15, 681-9 1985: A Role Delineation Study in Hand Surgery
- 7) Chang documents
- 8) Committee input (Doug Sammer, Kevin Lutsky, Tim Havenhill, Dawn Laporte, Ryan Calfee, Tamara Rozental, Angela Wang, MIB)
- 9) Council input

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