

ASPETAR ORTHOPAEDIC SPORTS FELLOWSHIP PROGRAM *HANDBOOK*



Prepared by:

BASHIRA. ZIKRIA MD, MSc.

Chief of Orthopaedic Department | Aspetar
Adjunct Professor of Johns Hopkins School of
Medicine; Director of Sports Medicine
Education: Department of Orthopaedics

KHALID AL-KHELAIFI MD, FRCS

Fellowship Program Director | Aspetar
Sports Orthopaedic Surgeon Assistant
Professor, Qatar Weill Cornell Medical
College

TABLE OF CONTENTS

FELLOWS ORIENTATION CHECKLIST	1
INTRODUCTION	2
MESSAGE FROM THE PROGRAM DIRECTOR	2
ABOUT THE FELLOWSHIP PROGRAM	2
OVERVIEW	3
ABOUT ASPETAR ORTHOPAEDIC SURGERY DEPARTMENT	3
OBJECTIVES	3
STRUCTURE AND SERVICES	3
RELATED LINK:	3
ASPETAR ORTHOPAEDIC SPORTS FELLOWSHIP DESCRIPTION	4
FELLOWSHIP GOALS AND OBJECTIVES	4
A. PATIENT CARE	4
B. INTERPERSONAL AND COMMUNICATION SKILLS	5
C. PROFESSIONALISM	5
D. MEDICAL KNOWLEDGE	5
E. PRACTICE-BASED LEARNING AND IMPROVEMENT	6
F. EXTRA-CURRICULAR ACTIVITIES	6
ASPETAR SPORTS MEDICINE ORTHOPAEDIC FELLOWSHIP GUIDE	7
GOALS OF THE SPORTS MEDICINE FELLOWSHIP	7
CONFERENCES	7
SURGICAL SKILLS LAB	7
CLINIC	7
ROTATION SCHEDULE	8
CONFERENCE SCHEDULE	9
GENERAL PRACTICE REQUIREMENTS	10
PATIENT CARE	10
MENTORSHIP AND RESEARCH	10
PROFESSIONALISM	10
MEDICAL KNOWLEDGE	10
TEAM SPORTS COVERAGE	11

INFORMATION AND SUPPORT	12
CONTACT PERSON	12
APPENDIX 1 EDUCATIONAL CURRICULUM	13
KNEE / TIBIOFEMORAL	13
KNEE / PATELLOFEMORAL	14
ANKLE	15
FOOT	15
HIP / PELVIS	16
SHOULDER / GLENOHUMERAL	17
ELBOW	18
WRIST / HAND	19

FELLOWS ORIENTATION CHECKLIST

Fellow's Full Name:

Please tick box and sign when completed.

INTRODUCTORY MEETINGS

Introduction to Director of Fellowship Program	
Introduction to Chief of Orthopaedic Department	
Introduction to Chief Medical Officer	
Introduction to Surgical Team	
Introduction to nursing staff - OPD, Ward III, Operating Theatre	
Introduction to other Departments: SMP, Radiology, Education, Research, NSMP, Physiotherapy & Rehabilitation	

POLICIES AND PROCEDURES | Surgery Department & Human Resources

Clinical pathways reviewed	
Surgical scope of service reviewed	
Informed consent procedure reviewed	
Operating theatre booking procedure reviewed	
Consent for research / photography reviewed	
Medical notes reviewed	
Emergency Codes reviewed	
Knowledge of fire evacuation procedure of OPD	
Knowledge of fire evacuation procedure of operating suite	
Position of Emergency "crash" trolleys known	

Fellow
 Date / Signature

**Director of Fellowship
 Program**
 Date / Signature

**Chief of Orthopaedic
 Department**
 Date / Signature

INTRODUCTION

Aspetar, Qatar Orthopaedic and Sports Medicine Hospital, is internationally recognized for excellence in sports medicine and science clinical care, research and education. A team of multi-profession experts from across the globe deliver the highest standard of clinical care to many local and international competitive and recreational athletes in state-of-the-art facilities. Aspetar's Clinical Specialist Fellowship (Orthopaedic Surgery) program provides the unique opportunity for fellows to work closely with a group of world-class Orthopaedic Surgeons, Sport and Exercise Medicine Physicians, and other sports medicine experts providing integrated athlete clinical care.

Aspetar's Clinical Specialist Fellowship (Orthopaedic Surgery) program is not a mere educational experience; it is a highly individual mentorship program that creates life-long professional friendships. This program provides fellows with a strong foundation to become world-renowned surgeons as part of the Aspetar clinical family.

MESSAGE FROM THE PROGRAM DIRECTOR

The Aspetar Clinical Specialist Fellowship (Orthopaedic Surgery) is a comprehensive and very well structured one-year program, providing a well-rounded approach to post-residency clinical training. The Aspetar faculty members are all highly qualified, skilled and experienced consultants in their respective clinical specialties.

The core clinical training focusses on surgical and clinical skills. In combination with out-patient clinics, fellows also work in the operating theatre where they learn different surgical techniques. The operative experience involves surgeries on different joints, including shoulder, elbow, wrist and hand, ankle, knee, and groin.

Aspetar's Clinical Specialist Fellows will also be involved in providing medical care to many domestic and international sports events that Qatar is hosting.

Fellows have the opportunity to contribute to Aspetar's clinical education program, including many accredited Continuing Professional Development / Continuing Medical Education activities (journal clubs, case presentations, Aspetar Tuesday Lecture Series and Aspetar's Wednesday Webinar Series).

Aspetar's Clinical Specialist Fellowship program prioritize research; we ensure appropriate support and mentorship to publish in peer-reviewed journals. In addition to dedicated lectures and tutorials on different topics, we also provide fellows with hands-on surgical skills training through Aspetar's Surgical Skills Laboratory.

We are very proud of our Clinical Specialist Fellowship Program and our many graduating fellows. We look forward to welcoming you to the Aspetar family soon!

ABOUT THE FELLOWSHIP PROGRAM

Program Director: Khalid Al-Khelaifi, MD, FRCSC

Duration: One year

Malpractice Insurance: Provided

Health Benefits: Included

OVERVIEW

About Aspetar Orthopaedic Surgery Department

The Surgery Department is a core unit of the patient care system within Aspetar. Its team of accomplished surgeons are committed to providing innovative care with the aim of delivering optimal healing and improved outcomes. The team consists of permanent and a visiting staff of surgeons. Our surgeons work closely with the other medical and clinical professionals of Aspetar to ensure return to play as soon as possible for the many athletes who take advantage of our services. Those professional services reporting to Surgery include the Anaesthesia Department which oversees the Aspetar Pain Management Services, Medical Consultants who provide 24-hour coverage of the Inpatient Surgical and Medical patient populations, and the Sports Groin Pain Centre.

The Surgery department offers comprehensive diagnosis, counseling, patient support, and expert surgical care for sports-related injuries. As specialists in arthroscopic and open surgical techniques, our surgical team is highly qualified to treat all forms of musculoskeletal injuries sustained by athletes.

Surgery department provides expertise in the following orthopaedic surgery subspecialties:
Full Educational Curriculum in appendix 1

- Arthroscopy
- Knee Surgery
- Shoulder Surgery
- Foot and Ankle Surgery
- Hand and Upper Extremity Surgery
- Groin Pain Surgery

Objectives

- Increase clinical support for national and international athletes.
- Become a leader in Orthopaedic and Sports Medicine Education at the international level.
- Oversee and facilitate research development in Medical Anatomical Sciences.

Structure and Services

- Permanent Orthopaedic Surgery Program
- Visiting Orthopaedic Surgery Program
- Anaesthesia Services
- Pain Management Services
- Inpatient Medical Consultant Services
- Surgical Education Program that includes:
 - ❖ Surgical Fellowship Program
 - ❖ Orthopaedic Residency Training Program
 - ❖ Observership Program
 - ❖ Sports Surgery Training Centre
- Surgery Research Program
- Sports Groin Pain Centre

Related Link:

- <https://www.aspetar.com>

ASPETAR ORTHOPAEDIC SPORTS FELLOWSHIP DESCRIPTION

The Aspetar Orthopaedic Sports Fellowship is designed to provide comprehensive training for the individual who wishes to practice sports medicine in either a private practice or academic setting. Fellows will have a diverse experience in both the clinical and surgical settings, with an opportunity to diagnose and treat a wide spectrum of pathology. A balanced, evidence-based, patient-centric, value-driven approach is emphasized.

Aspetar serves as a tertiary referral center for sports medicine patients including professional, amateur and recreational athletes. Since we are a tertiary referral service the fellows will expect to see complex cases as well as the routine surgical cases. Fellows can expect to participate in a range of simple to complex cases in shoulder arthroscopy, knee arthroscopy, elbow arthroscopy, wrists arthroscopy, open surgical techniques, sports fractures, and current joint preservation techniques. The fellow will be involved in clinic with the faculty surgeons but will also have their own clinic one half day each week.

The fellowship also has a weekly didactic program covering a comprehensive curriculum. Indications presentations are incorporated into these sessions and are multidisciplinary in nature (medical students, residents, fellows, physician assistants, therapists, and faculty). Additional motor skills training is available via a surgical skills training lab. Dry model stations and cadaveric specimens can be used for both arthroscopic and open techniques with a full complement of equipment. Faculty will also formally and informally teach practice management skills including billing, coding, and documentation in electronic medical records.

The fellow will interact with students, orthopaedic residents, and non-operating residents from other programs. The fellow will have teaching opportunities in the clinic and the operating room.

There are many opportunities for clinical or biomechanical research depending upon the desires of the individual. Each fellow is required to perform one research project, which should be submitted prior to the end of the fellowship. Additional involvement in other projects (clinical outcomes, cost-effectiveness, and value analysis studies) and publications is encouraged.

FELLOWSHIP GOALS AND OBJECTIVES

The sports fellow will be able to:

A. Patient Care

- 1) Demonstrate proficiency in performing a history and physical examination for patients with simple to complex sports medicine disorders.
- 2) Demonstrate proficiency in ordering and interpreting appropriate plain radiographs, CT and MR images.
- 3) Demonstrate proficiency in formulating an appropriate treatment plan based on history, examination, and imaging findings.
- 4) Know the evaluation strategy and initial management (non-operative and operative) of patients.
- 5) Demonstrate understanding of surgical indications.
- 6) Consistently mark patients with initials prior to surgery and drape the initials into the surgical field.
- 7) Consistently perform the surgical time-out prior to incision.
- 8) Consistently ensure antibiotic delivery prior to incision.

- 9) Demonstrate basic to advanced operating room skills (arthroscopy, open surgery, fracture care):
 - a. Room set-up, equipment requisition, understanding of surgical table and positioning safety
 - b. Ankle, knee, shoulder, elbow, and wrist surgical procedures both arthroscopic and open
- 10) Demonstrate the ability to care for orthopaedic sports patients postoperatively:
 - a. Pain management
 - b. Wound care
 - c. Physical therapy and rehabilitation for each surgical procedure and non-operative care
- 11) Demonstrate familiarity with instructions for the patient at their first postoperative visit for sports surgeries.
- 12) Demonstrate understanding of rehabilitation protocols for sports surgeries.
- 13) Evaluate patient questions and concerns in a timely fashion when contacted by patient, staff, or attending.

B. Interpersonal and Communication Skills

- 1) Refine ability to listen to patients' concerns and express sensitivity and empathy for their medical problems.
- 2) Explain the risks and goals of surgery to patients and their families and alternatives to surgery (perform informed consent).
- 3) Establish an effective doctor-patient relationship – attire, grooming, demeanor, concern, and commitment.
- 4) Establish an appropriate level of communication and relationship with ancillary staff:
 - a. Refrain from abusive behavior; Be courteous, constructive, and positive
 - b. Evaluate patient questions and concerns in a timely fashion.

C. Professionalism

- 1) Demonstrate sensitivity and responsiveness to differences in culture, gender, age, and impairments of both patients and staff.
- 2) Demonstrate sensitivity to the needs of patients and families.
- 3) Demonstrate reliability in the performance of responsibilities.
- 4) Be respectful of the opinions of other healthcare professionals.
- 5) Demonstrate ability to express opinions in a manner that is sensitive to others.
- 6) Demonstrate appropriate attire, grooming, demeanor, concern, and commitment.
- 7) Take full ownership of patient care, communication, and education:
 - a. Understand responsibilities and fulfill them without need for reminders from staff or attendings.
 - b. Seek out educational opportunities and complete outside readings.
 - c. Prepare for surgery by reading operative notes, textbooks and journal articles, and watching instructional videos.

D. Medical Knowledge

- 1) Acquire advanced knowledge of surgical anatomy of the sports medicine surgical procedures (Textbooks, videos, operative experience).
- 2) Demonstrate advanced understanding of the pathophysiology, clinical presentation, physical examination, and treatment options for sports medicine

- 3) Acquire and demonstrate understanding of rehabilitation protocols for non-operative conditions and for post-operative sports procedures.
- 4) Acquire and demonstrate working knowledge of on-field sports medicine.
- 5) Understand management of the various levels of patient-athletes.

E. Practice-Based Learning and Improvement

- 1) Demonstrate ability to analyze effectiveness of his or her own interpretive, problem-solving, and surgical skills.
- 2) Be receptive to constructive criticism and change actions accordingly.
- 3) Demonstrate capability and improving proficiency in performing each of the following:
 - a. Diagnostic arthroscopy and portal placement
 - b. Arthroscopic basic and complex procedures
 - c. Surgical approaches for open surgery
 - d. Understanding the treatment of complications
- 4) Appreciate strengths and weakness of the varied approaches to the above surgical procedures.

F. Extra-Curricular Activities

- 1) Field of Play: Fellows will have the opportunity to join the medical staff team at sports events in Qatar. (Athletics, Swimming, Football, Cycling, etc.), using these opportunities to interact with of field assessment and treat potential injuries during events.
- 2) National Sports Medicine Program / NSMP: Interaction with club doctors in Qatar, in different modalities (Handball, Basketball, Volleyball, Football, etc.) regarding to athletes injury, rehabilitation, training program, competition and games coverage and medical cooperation.
- 3) Arthrex Training Lab: International travelling training program (3 days) in Arthrex Lab Munich, Germany or Naples, USA, supported and sponsored by industry.
- 4) Diploma Ceremony: fellows will be rewarded with diploma of accomplishment at the 'end of the year' from an I-ACGME accredited fellowship.
- 5) In general, graduates of the Aspetar Sports Medicine fellowship are expected to achieve a high level of clinical and surgical expertise with an ability to deliver care in the most conscientious, compassionate, and ethical manner. We further expect the fellows to develop an understanding of the healthcare system, an appreciation and focus on delivering value, and to foster an ongoing desire to learn and improve.

ASPETAR SPORTS MEDICINE ORTHOPAEDIC FELLOWSHIP GUIDE

GOALS OF THE SPORTS MEDICINE FELLOWSHIP

- To develop a wide knowledge base and gain extensive clinical experience in the evaluation and management of athletic injuries.
- To participate in teaching the principles of athletic injuries and their management to orthopaedic residents and medical students.
- To participate in sports medicine research with the aims of improving one's research skills and furthering the total foundation of knowledge concerning athletic injuries.

CONFERENCES

- Pre & Post-Operative Review: Every Sunday, 7:30 - 8:30 am
Each week will present topic from interesting case of the week.
- Aspetar Lectures: Every Tuesday, 8:00 - 9:00 am, Aspetar Auditorium, or via MS Teams
- Fellowship Conference: Every Monday 7:30 - 8:15 am
- Morbidity and Mortality Conference: First Monday of every month.
- Journal Club

SURGICAL SKILLS LAB

A curriculum for teaching arthroscopy to fellows that utilizes cadaveric specimens and includes a series of labs addressing the key arthroscopic issues and procedures for the knee, ankle, wrist, elbow, and shoulder. Each joint-specific curriculum begins with diagnostic arthroscopy, proceeds through arthroscopic techniques of advancing difficulty and concludes with open procedures.

CLINIC

Fellows cover the clinic with the residents. Cases are discussed with the attending present in each clinic. Attending physicians cover all clinics. Fellows share full responsibility for the patient, including preoperative, operative, and postoperative care. Each clinic case is thoroughly discussed with the attending physician.

Each fellow will be supervised by team A, B and C, and will rotate every 6 weeks.

- **Team A:** Khalid Al-khelaifi, Emmanouil Papakostas
- **Team B:** Bashir Zikria, Bruno Olory
- **Team C:** Pieter D'Hooghe, Elisabet Hagert

Every week the fellows will be assigned a half day post-op clinic (first follow-up), and a half administrative work day.

Fellows will also be the second person on call after working hours. On-call roster will be sent monthly.

ROTATION SCHEDULE

FELLOWS DAILY SCHEDULE:

- Daily morning rounds: sign in patients in ward3.
- Check OPD schedule if fellows are assigned to assist with outpatient clinics
- Check OT schedule if fellows are assigned to assist with surgical cases in OT
- Attend the Pre-post operative review meetings every Sunday at 7:30am
- Attend the Fellowship conferences every Monday at 7:30am.

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
OPD* 9:00 - 12:00	ZIKRIA ALKHELAIFI VISITING SURGEON	PAPAKOSTAS ALKHELAIFI HAGERT VISITING SURGEON	BRUNO VISITING SURGEON	ZIKRIA HAGERT	PAPAKOSTAS BRUNO D'HOOGHE
OPD* 13:00 - 16:00 <i>Wednesdays 13:00 – 15:00</i>	ZIKRIA ALKHELAIFI VISITING SURGEON	PAPAKOSTAS ALKHELAIFI HAGERT VISITING SURGEON	BRUNO D'HOOGHE VISITING SURGEON	ZIKRIA HAGERT D'HOOGHE	PAPAKOSTAS BRUNO
OT*	PAPAKOSTAS (every week)	D'HOOGHE (every week)	ZIKRIA (every week)	ALKHELAIFI BRUNO (every week)	HAGERT (every week)
	HAGERT/or BRUNO (Rotation every other week)		ALKHELAIFI/or PAPAKOSTAS (Rotation every other week)		ZIKRIA (Rotation every other week)
				VISITING SURGEON	VISITING SURGEON
Meetings Lectures Conferences Surgical Lab	Pre/post- operative review 7:30 - 8:30	Fellowship Conference 7:30 - 8:15	Tuesday Lecture 8:00 - 9:00		
Sports Events Coverage with NSMP Club Doctor	<i>As per Events Schedule</i>				

**Every other week alternate between OPD and OR*

**Dynamic schedule is subject to changes*

CONFERENCE SCHEDULE

Conference schedule – one hour per week

One conference per month done by the fellow

Labs – 1 to 2 hours

Conferences Date: Every Monday morning 7:30 - 08:15

35 weeks of Conferences

6 Guest Speakers

6 Journal Clubs

1. Knee anatomy and imaging - one hour
2. ACL anatomy and treatment. Including augmentation
3. PCL and Collateral ligament. Including multi ligament injuries
4. Meniscal anatomy and treatment
5. Articular cartilage injuries
6. KNEE LAB
7. Interesting knee cases – participation conferences
8. Patella femoral disorders
9. Non arthroplasty options DJD
10. Sports Ankle and Foot injuries
11. Interesting ankle cases – participation conferences
12. ANKLE LAB
13. Shoulder anatomy and imaging
14. Shoulder instability
15. Rotator cuff disorders
16. Superior labrum and biceps disorders
17. AC Joint, Clavicle, and SC joint
18. Interesting Shoulder Cases
19. SHOULDER LAB
20. Throwers elbow and Elbow instability
21. Elbow overuse injuries and Elbow arthroscopy
22. Hand and Wrist injuries
23. Interesting Hand, Wrist, and Elbow cases
24. ELBOW and WRIST LAB
25. Athletic pubalgia and Groin injury
26. Athletic Hip Injuries and FAI
27. Orthobiologics in sport
28. Interesting Orthobiologics and Groin cases
29. Sports Medicine – medical concepts
30. Concussion
31. Team physician
32. Lower extremity rehabilitation
33. Upper extremity rehabilitation
34. The young athlete (skeletally immature)
35. Managing Complications

GENERAL PRACTICE REQUIREMENTS

Patient Care

- 1) Perform a competent knee and shoulder with the ability to understand all portals and having the ability to navigate effectively to visualize pathology.
- 2) Understand open techniques and when applicable. Understand the difference of several techniques for treatment.
- 3) Perform a capable diagnosis and treatment.
- 4) Perform a thorough and comprehensive sports patient evaluation including patient interview, physical examination, radiographic interpretation and development of a treatment plan.
- 5) Understand the principles of arthroscopy and anatomy of the knee. Understand the anatomy of the shoulder and know nonoperative vs. operative indications.

Mentorship and Research

- a. **Each fellow will be given a mentor. They will assist the fellow in all aspects of clinical practice.**
- b. **Whether a Fellow is interested in pursuing a career in clinical or academic sports medicine. Each Fellow is required to complete at least one research projects during the Fellowship year. Projects will be reviewed by their mentor. The mentor will help with the project as well guide the fellow based on the Fellows' general interests in the subject matter.**
- c. **Research day end of the year**
- d. **Award best research project**
- e. **Recommendation from ISAKOS Leadership Program.**

Professionalism

- 1) Demonstrate sensitivity and responsiveness to differences in culture, gender, age, and impairments of both patients and staff.
- 2) Demonstrate sensitivity to the needs of older patients in terms of support for their specific and multiple needs.
- 3) Demonstrate reliability in performance of responsibilities.
- 4) Demonstrate respect toward opinions of other healthcare professionals.
- 5) Demonstrate ability to express opinions in a manner sensitive to others.

Medical Knowledge

- 1) Working knowledge of anatomy of shoulder, elbow, hip, knee, and ankle.
- 2) Working knowledge of biomechanics & kinematics of shoulder, elbow, hip, knee, and ankle.
- 3) Learning knee and shoulder exams. Learning to read MRI's of the knee and shoulder.
- 4) Introduction to arthroscopy. Teach basic arthroscopic skills such as: portals, portal placement, diagnostic knee arthroscopy, and diagnostic shoulder arthroscopy.

- 5) Also, learn techniques for arthroscopic partial meniscectomy vs meniscal repair. Techniques for ACL reconstruction. Learn arthroscopic rotator cuff repairs and labral repairs.
- 6) Differential diagnosis for a knee effusion, painful knee, painful shoulder, stiff knee or shoulder, sports hip injuries, and common sports ankle injuries.
- 7) Learn basic nonoperative rehabilitation protocols. Learn postoperative rehabilitation protocols.

- 8) Learn on the field sports medicine:
 - Participating in pre-season physicals
 - Participate in athletic training rooms
 - Learning to cover a sporting event
 - Learn basic on the field emergencies (C Spine injuries in football)
 - Learn emergent treatment of multiligament knee injuries
 - Learning the team approach with athletic trainers

Team Sports Coverage

Each fellow will have a sports team and training room coverage under direction of Team Physician.

- One Training Room | as per event
- One Game | as per event

INFORMATION AND SUPPORT

CONTACT PERSON

NAME	TITLE	SCOPE OF SERVICE
Pieter D'Hooghe	Chief Medical Officer	Knee, ankle, foot
*Bashir Zikria *Nawal Lebdine: Lead Coordinator	Chief of Orthopaedic Department	Elbow, shoulder, knee
*Khalid Al Khelaifi	Director of Fellowship Program Orthopaedic Surgeon	Knee, shoulder
Emmanouil Papakostas	Orthopaedic Surgeon	Knee, shoulder, cartilage, (ankle)
Bruno Olory	Orthopaedic Surgeon	Foot, ankle, knee
Elisabet Hagert	Orthopaedic Surgeon	Hand
Marco Cardinale	Executive Director of Research & Scientific Support	Research
Louis Holtzhausen	Chief of Sports Medicine	Sports Medicine
Paul Dijkstra	Director of Medical Education	Medical Education

Note: *First Day Contact Person

Appendix 1 | EDUCATIONAL CURRICULUM

Curriculum - Basic Curriculum based on ACGME - Short Summary of most common procedures. Full Curriculum in the AAOSM, which will be emailed. Each topic will be covered thoroughly see below:

- Anatomy
- Biomechanics
- Evaluation
- Treatment
 - Nonoperative
 - Operative – techniques
 - Complications – management

KNEE / TIBIOFEMORAL

- I. Ligament (ACL, PCL, MCL, LCL/posterolateral corner)
 - A. Basic Science *
 - B. Clinical
 1. Classification of Injury/Disease (traumatic, inflammatory, tumor)
 2. Evaluation**
 3. Management***
 - a. Non-operative^A
 - i. Isolated
 - aa. ACL
 - bb. PCL
 - cc. MCL
 - dd. LCL/Posterolateral
 - ii. Combined injuries
 - iii. Dislocated knee
 - iv. Arthritis/Instability
 - b. Operative^B
 - i. Isolated
 - aa. ACL
 - bb. PCL
 - cc. MCL
 - dd. Posterolateral
 - ii. Combined injuries
 - aa. ACL/medial
 - bb. ACL/lateral
 - cc. PCL/medial
 - dd. PCL/lateral
 - iii. Dislocated knee
 - iv. Arthritis/instability
- II. Cartilage/Articular (chondral/osteochondral)
 - A. Basic Science *
 - B. Clinical
 1. Classification of Injury/Disease
 - a. Etiology
 - i. Traumatic
 - ii. Degenerative
 - iii. Inflammatory
 - iv. Tumor
 - v. Other
 - b. Timing
 - i. Acute vs. chronic
 - c. Location
 - i. Depth/size
 2. Evaluation**
 3. Management***
 - a. Non-operative^A

- b. Operative^B
 - i. Traumatic (acute/chronic)
 - aa. Chondral
 - bb. Osteochondral
 - ii. Degenerative
 - iii. Inflammatory

III. Meniscal

- A. Basic Science *
- B. Clinical
 - 1. Classification of Injury/Disease (see articular cartilage)
 - 2. Evaluation **
 - 3. Management ***
 - a. Non-operative^A
 - b. Operative^B
 - i. Meniscectomy
 - ii. Meniscal repair
 - iii. Meniscal replacement

KNEE / PATELLOFEMORAL

- I. Ligament (medial, lateral capsule and ligaments)
 - A. Basic Science *
 - B. Clinical
 - 1. Classification of Injury/Disease (traumatic, inflammatory, tumor)
 - 2. Evaluation**
 - 3. Management***
 - a. Non-operative^A
 - i. Maltracking/Instability
 - aa. Alta
 - bb. Baja
 - cc. Medial
 - dd. Lateral
 - ii. Arthritis/Instability
 - b. Operative^B
 - i. Maltracking/Instability
 - aa. Alta
 - bb. Baja
 - cc. Medial
 - dd. Lateral
 - ii. Arthritis/Instability
- II. Cartilage/Articular (chondral/osteochondral)
 - A. Basic Science *
 - B. Clinical
 - 1. Classification of Injury/Disease
 - a. Etiology
 - i. Traumatic
 - ii. Degenerative
 - iii. Inflammatory
 - iv. Tumor
 - v. Other
 - b. Timing
 - i. Acute vs. chronic
 - c. Location
 - i. Depth/size
 - 2. Evaluation**
 - 3. Management***
 - a. Non-operative^A
 - b. Operative^B

- i. Traumatic (acute/chronic)
 - aa. Chondral
 - bb. Osteochondral
- ii. Degenerative
- iii. Inflammatory

ANKLE

I. Ligament

- A. Basic Science *
- B. Clinical
 - 1. Classification of Injury/Disease
 - 2. Evaluation**
 - 3. Management***
 - a. Non-operative^A
 - i. Ankle sprains
 - b. Operative^B
 - i. Ankle sprains
 - aa. Acute
 - bb. Chronic

II. Cartilage

- A. Basic Science *
- B. Clinical
 - 1. Classification of Injury/Disease
 - a. Traumatic
 - i. OCD
 - ii. Osteochondral fractures
 - iii. Chondral injury
 - b. Degenerative
 - i. DJD
 - ii. Loose bodies
 - 2. Evaluation**
 - 3. Management***
 - a. Non-operative^A
 - b. Operative^B
 - i. Open, arthroscopic

III. Tendon

- A. Basic Science *
- B. Clinical
 - 1. Classification of Injury/Disease
 - 2. Evaluation**
 - 3. Management***
 - a. Non-operative^A
 - i. Tendonitis
 - aa. Achilles
 - bb. Posterior tibial
 - cc. Peroneal
 - dd. Bursitis
 - ee. Retrocalcaneal bursitis
 - b. Operative^B
 - i. Achilles tendon rupture/tendinitis
 - ii. Posterior tibial tendinitis/rupture
 - iii. Peroneal tendinitis/rupture

FOOT

I. Ligament

- A. Basic Science *
- B. Clinical
 - 1. Classification of Injury/Disease

2. Evaluation**
 3. Management***
 - a. Non-operative^A
 - i. Mid-foot – sprain and diastasis (Lisfranc injuries)
 - ii. Plantar Fascia
 - b. Operative^B
 - i. Mid-foot – sprain and diastasis (Lisfranc injuries)
 - ii. Plantar fascia
- II. Cartilage – Chondral injuries
DJD – Hallus rigidus
- III. Tendon - Ruptures
Flexor tendons
Extensor tendons
- IV. Muscle – compartment syndrome
- V. Bone
- A. Basic Science *
 - B. Clinical
 1. Classification of Injury/Disease
 2. Evaluation**
 3. Management***
 - a. Non-operative^A
 - i. Toe injuries
 - aa. Turf toe
 - bb. Hallux rigidus
 - cc. Sesamoid injuries
 - ii. Forefoot injuries
 - aa. MTP joint injuries
 - bb. Bunions
 - cc. Metatarsal stress fracture
 - dd. Fractures
 - ee. Fractures at the base of the 5th metatarsal
 - ff. Osteonecrosis
 - gg. Tarsal coalition
 - iii. Midfoot injuries
 - aa. Stress fractures
 - bb. Accessory navicular
 - iv. Hindfoot injuries
 - aa. Pes planus
 - bb. Tarsal bossing
 - cc. Calcaneal stress fracture
 - dd. Plantar fasciitis

HIP / PELVIS

- I. Ligament
 - A. Basic Science *
 - B. Clinical
 1. Classification of Injury/Disease
 - a. SI Sprain
 - b. Hip subluxation/dislocation
 2. Evaluation**
 3. Management***
 - a. Non-operative^A
 - i. Ligamentous sprain
 - ii. SI joint sprain
 - b. Operative^B
 - i. Capsule
 - ii. Ligamentous tears

SHOULDER / GLENOHUMERAL

- I. Ligament (IGHL, MGHL, SGHL, Labrum)
 - A. Basic Science*
 - B. Clinical-Instability
 1. Classification of Injury/Disease
 - a. Traumatic
 - i. Instability
 - aa. Direction
 - bb. Degree
 - cc. Timing
 - dd. Acute/chronic
 - ee. Associated Pathology
 - ff. Frequency
 - b. Inflammatory
 - i. Post-trauma/surgery
 - c. Other
 - i. Adhesive capsulitis
 2. Evaluation **
 3. Management ***
 - a. Non-Operative^A
 - i. Unidirectional
 - aa. Anterior
 - bb. Posterior
 - cc. Inferior
 - ii. Multidirectional
 - iii. Adhesive capsulitis
 - b. Operative^B (open/arthroscopic)
 - i. Unidirectional
 - aa. Anterior
 - bb. Posterior
 - cc. Inferior
 - ii. Multidirectional
 - iii. Adhesive capsulitis
 - C. Labral (superior, anterior, posterior)
 1. Basic Science*
 2. Clinical
 - a. Classification of Injury/Disease
 - i. Traumatic (SLAP, Bankart)
 - ii. Degenerative
 - b. Evaluation**
 - c. Management***
 - i. Non-operative^A
 - ii. Operative^B
 - aa. Traumatic (SLAP, Bankart)
 - bb. Degenerative
- II. Tendon (rotator cuff, biceps)
 - A. Basic Science *
 - B. Clinical
 1. Classification of Injury/Disease
 - a. Traumatic-tear
 - b. Inflammatory
 - i. Mech. impingement
 - ii. Calcific tendonitis
 - iii. Assoc. pathology
 - aa. GH arthritis (cuff arthropathy)

- bb. AC joint arthritis
- cc. Bicep tendon
- dd. GH instability
- c. Other/tumor
- 2. Evaluation**
- 3. Management***
 - a. Non-operative^A
 - i. Impingement/tendonitis
 - ii. Rotator cuff tear (partial to full)
 - iii. Rotator cuff arthropathy
 - iv. Instability/tendonitis
 - v. Bicep tendonitis/rupture
 - b. Operative^B
 - i. Impingement/tendonitis
 - ii. Rotator cuff tear (partial to full)
 - iii. Rotator cuff arthropathy
 - iv. Instability/tendonitis
 - v. Bicep tendonitis/rupture

ELBOW

- I. Ligament
 - A. Basic Science *
 - B. Clinical
 - 1. Classification of Injury/Disease
 - 2. Evaluation**
 - 3. Management***
 - a. Non-operative^A
 - i. Acute medial rupture
 - ii. Chronic medial rupture
 - iii. Dislocations
 - b. Operative^B
 - i. Acute medial rupture
 - ii. Acute lateral rupture
 - iii. Chronic medial rupture
 - iv. Dislocation
- II. Cartilage
 - A. Basic Science *
 - B. Clinical
 - 1. Classification of Injury/Disease
 - a. OCD (loose bodies)
 - b. DJD
 - 2. Evaluation**
 - 3. Management***
 - c. Non-operative^A
 - i. OCD
 - ii. DJD
 - d. Operative^B (open/arthroscopic)
 - i. OCD
 - ii. DJD
- III. Tendon
 - A. Basic Science *
 - B. Clinical
 - 1. Classification of Injury/Disease
 - a. Epicondylitis
 - b. Biceps/triceps – tendinitis
 - c. Biceps/triceps – ruptures

2. Evaluation**
3. Management***
 - a. Non-operative^A
 - i. Lat. Epicondylitis
 - ii. Medial (Flexor/Pronator) tendinitis
 - iii. Biceps tendonitis/triceps
 - iv. Tendon rupture
 - b. Operative^B
 - i. Lat. Epicondylitis
 - ii. Medial tendinitis
 - iii. Biceps rupture
 - iv. Tendon rupture

WRIST / HAND

I. Ligament

- A. Basic Science *
- B. Clinical

1. Classification of Injury/Disease
 - a. Carpal Instability
 - b. Thumb MCP Instability
2. Evaluation**
3. Management***
 - a. Non-operative^A
 - i. Wrist sprain
 - ii. DRUJ sprain
 - iii. Thumb MCP sprain
 - iv. Finger sprain
 - v. Finger dislocation
 - b. Operative^B
 - i. Wrist instability (acute/chronic)
 - ii. DRUJ instability (acute/chronic)
 - iii. Skier's thumb (thumb UCL sprain)
 - iv. Thumb RCL sprain
 - v. Finger dislocation

II. Cartilage

- A. Basic Science *
- B. Clinical

1. Classification of Injury/Disease
2. Evaluation**
3. Management***
 - a. Non-operative^A
 - i. TFC tear
 - ii. DJD – thumb – CMC
 - iii. DJD – carpals
 - iv. DJD – fingers
 - b. Operative^B (open/arthroscopic)
 - i. TFC tears
 - ii. DJD – thumb – CMC