

Arthroscopy and Sports Medicine Fellowship Training

Objectives and Syllabus

Ganga Medical Centre and Hospitals, Coimbatore

PROGRAMME GOAL

The goal of the Arthroscopy and sports medicine Fellowship is to provide fellows with intensive training and broad exposure in the diagnosis and treatment of a wide spectrum of knee, shoulder, foot and ankle, hip and elbow sports related soft tissue injuries.

This fellowship offers comprehensive exposure to knee pathologies like Cruciate & collateral ligament tears, meniscus injuries, cartilage injuries; shoulder pathologies like cuff tears, recurrent shoulder instabilities, foot and ankle pathologies like ATFL tears, OCD lesions. This program is designed for the orthopedic surgeon who is dedicated to developing a strong foundation in the management of all aspects of Arthroscopy, employing the most advanced surgical techniques and principles.

Upon completion of this Fellowship, fellows will be well-prepared to establish successful surgical practices, contribute meaningfully to research, and potentially pursue academic careers at leading medical centers and hospitals nationally and internationally.

PROGRAM OBJECTIVES

1. Accurate Clinical Assessment

Acquire the ability to identify sports related and other musculoskeletal injuries affecting major joints through focused clinical history and physical examination, mastering key examination techniques relevant to these regions.

2. Diagnostic Investigations

Gain proficiency in selecting and interpreting appropriate imaging and diagnostic tests—such as plain radiographs, CT scans, MRI, and other necessary investigations—to accurately diagnose musculoskeletal injuries and to develop individualized treatment plans.

3. Outpatient Patient Management

Cultivate effective patient management skills in the outpatient setting, including clear, empathetic communication with patients and their families regarding diagnoses, treatment possibilities, and expected outcomes or prognosis.

4. Decision-Making for Treatment Approaches

Develop the clinical reasoning to appropriately distinguish between operative and non-operative management for musculoskeletal injuries, understanding indications, contraindications, and patient-specific considerations.

5. Surgical Planning and Technical Skills

Enhance the ability to plan and perform arthroscopy procedures- starting from basic diagnostic arthroscopy and triangulation to complex ligament reconstructions.

6. Rehabilitation Principles

Understand the key principles of postoperative rehabilitation to optimize clinical outcomes and ensure safe and effective return to sport for patients.

7. Implant and Device Utilization

Gain experience in the selection and use of a range of surgical implants and fixation devices, recognizing their specific indications and optimal applications.

8. Research Involvement

Develop skills as a clinical investigator by actively participating in research projects—both retrospective and prospective—related to arthroscopy and sports medicine.

9. Medicolegal Knowledge

Achieve a thorough understanding of the professional, legal, and ethical aspects relevant to the management of sports injuries, including professional liability.

10. Comprehensive Documentation

Master the importance of precise and detailed clinical documentation for all sports-related injuries, ensuring medicolegal compliance and high standards of patient care.

Eligibility Criteria:

The fellowship is open to orthopedic surgeons with the following eligibility criteria:

- * A postgraduate degree in Orthopaedic Surgery (e.g., MS Orthopaedics, DNB Orthopaedics or equivalent) from a recognized University.
- * Candidates who have completed two years of practice following postgraduate training are preferred (preferable).

The fundamental components of the teaching programme:

- * Case presentations & discussion: At least two interesting cases discussions once a week, focusing from basic to complex arthroscopy surgeries.
- * Seminar: Once a week, covering fundamental topics and principles of arthroscopic surgeries.
- * Journal club: Once a week, critical appraisal of recent and relevant literature in Arthroscopy and sports medicine
- * Faculty lecture teaching: Once a month, in-depth discussion of key concepts and advancements in Arthroscopy.
- * Presentation at a recognized conference: Completion of at least one poster presentation and one oral presentation during the fellowship training period. Opportunity to participate and present at regional, national and international conferences for staying up to date with recent developments in arthroscopy.
- * Research: Fellows will be required to undertake a research project and prepare a project in accordance with institutional guidelines. They will also have the opportunity to participate in ongoing research projects within the department to gain experience in research design, methodology, and execution.
- * Opportunity to publish research articles in peer reviewed national and international journals and co Author Textbook Chapters.

SYLLABUS

I. Basic and Applied Sciences

- **Musculoskeletal Anatomy:**
In-depth study of the ligaments and soft tissue structures surrounding the shoulder, knee, foot, and ankle, with a focus on anatomical features essential for understanding fracture mechanisms and guiding surgical techniques.
- **Implant Biomechanics and Surgical Techniques:**
Principles of how different various implants used in arthroscopy function, appropriate methods for deployment, and practical skills including knot tying.
- **Clinical Evaluation of Sports Injuries:**
Systematic methods for physical examination of patients with sports injuries, enabling accurate identification of injury patterns and decision-making between surgical and non-surgical interventions.
- **Radiologic Assessment:**
Interpretation and application of various imaging modalities such as plain X-rays, CT, and MRI scans in the evaluation and management of sports-related injuries.
- **Fundamentals of Arthroscopic Surgery:**
Core concepts including optimal timing for intervention, options for graft harvesting, techniques for tunnel positioning, and the selection and application of fixation devices.
- **Principles of Rehabilitation:**
Essential guidelines for preoperative and postoperative rehabilitation to achieve the best possible patient outcomes and facilitate a safe return to sport.

II. Joint-Specific Surgical Procedures

- **Knee: Ligament Reconstruction and Preservation**
 - Management of isolated cruciate ligament injuries
 - Comprehensive approach to multi-ligament knee injuries(MLKI), including timing of rehabilitation and single-stage reconstruction techniques
 - Meniscal surgery using multiple repair methods: inside-out, outside-in, all-inside techniques, and root repair
 - Meniscal transplantation procedures

- Arthroscopic reduction and internal fixation (ARIF) for ACL and PCL avulsions.
 - Cartilage preservation techniques such as mosaicplasty and autologous chondrocyte implantation
 - Treatment of patellar instability- MPFL reconstruction, tibial tuberosity transfer, and trochleoplasty
 - Corrective osteotomies around the knee: high tibial osteotomy, transcondylar valgus osteotomy (TCVO), slope correction, and distal femoral osteotomies.
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- **Shoulder Arthroscopy**
 - Arthroscopic rotator cuff repair for supraspinatus, infraspinatus, and subscapularis tears; biceps tenodesis
 - Management of irreparable rotator cuff tears using lower trapezius tendon transfers and muscle advancement procedures
 - Treatment of glenohumeral instability: arthroscopic Bankart repair, remplissage, bony Bankart repair, para-labral cyst decompression, Latarjet, and arthroscopic bone block procedure
 - Repair of SLAP lesions
 - ARIF for ACJ dislocations
 - Arthroscopic synovectomy for shoulder synovitis.
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- **Foot and Ankle Arthroscopy**
 - All-arthroscopic anterior talofibular ligament (ATFL) repairs
 - Arthroscopic microfracture procedure for osteochondral defects (OCD) of the talus
 - Deltoid ligament repair, Managing peroneal tendon subluxations, Tendoachilles tears

- **Hip Arthroscopy**

- Labral repair techniques
- Arthroscopic correction of femoroacetabular impingement, including CAM and Pincer lesion osteoplasty

- **Elbow Arthroscopy**

- Arthroscopic synovectomy
- Removal of loose bodies
- Arthroscopic lateral epicondylitis (tennis elbow) release.