

Arthroscopy Courses  
Curriculum guidelines in Diagnostic  
And operative Arthroscopy for postgraduate

Rational:

Few other areas of orthopedic surgery and traumatology have undergone such a dramatic evolution in the last 10 years as arthroscopy and knee surgery.

Diagnostic arthroscopy is a valuable tool for diagnosis of almost all knee problems as well as many other joints indication.

Arthroscopy surgery carries the benefit of minimal invasive surgery, so it has replaced most of the open knee surgeries in developed countries. Due to the lack of training and equipments this is rarely the case in resourceful constrained countries.

To keep the pace with the advanced arthroscopic surgeries, surgeons should develop a safe technique especially for the basic skills. These basic skills should be mastered by the widest possible base of orthopedic surgeons.

Goals:

Mastering the arthroscopic skills for performing the basic diagnostic and necessary operative knee arthroscopy.

After completion of this course, participants will be able to know the basic of diagnostic and operative arthroscopy along with the academic information that may help in the decision making process.

Learning objectives:

This course offers basic diagnostic and operative arthroscopic surgeries focusing on the hand skills and decision making for the postgraduates.

They should ultimately perform these procedures in the operating room under the direction of a skill faculty instructors.

The core of the course:

Steps of Basic arthroscopy:

Operating with instruments and devices.

Operating with arthroscopic knee anatomy.

Indications of arthroscopy.

Contraindications.

Operative technique.

Loose body extraction.

Partial meniscectomy.

Osteoarthritis.

ACL reconstruction.

Meniscal repair & cartilage repair.

Complications.

Reporting.

Basic diagnostic arthroscopy:

I. Operating with the instruments and devices:

Visualization system (camera, monitor, endoscope, light source and cable).

Surgical devices (motorized shaver, control unit, hand piece, foot switch and blades), and ablation devices.

Documentation system (video records, photo prints and computer).

Manual instruments (probe, basket punch, grasper, scissors and knives).

II. Arthroscopic knee anatomy:

a) Compartments:

- Supra patellar.
- Patello femoral.
  - Medial.
  - Lateral.
- Inter condylar.
- Posteaomedial.
- Posteralateral.

b) Cutters:

- Medial.
- Lateral.

III. Indications:

Diagnostic.

Loose body.

Meniscal tears.

Osteoarthritis.

Cartilage repair.

ACL reconstruction.

Synovectomy and pliaectomy.

Unexplained knee pain.

Intraarticular tumors.

Painful knee after T.K.R.

Pyogenic arthroscopy knee.

Arthrofibrosis.

IV. Contraindication:

Skin infection around the knee.

Bleeding tendency.

V. Operative technique:

Position (supine, leg free at the side or end of the table).

Anesthesia (general, spinal or local).

Skin preparation and draping.

Position of sheath & trocar & instruments (interolate, anteromed, supra patellar, mid. Parapatella, lateral parapatellar, posteromedial and posterolateral).

Scope introduction.

Inflating knee joint cavity with sterile fluid (saline, ringers lactate, glycine or water) or with gas (CO<sub>2</sub>).

Examination of knee joint compartments and gutters by inspection and probing.

Triangulation technique.

Closure and dressings.

VI. Loose body extraction:

types of loose body ( bony, cartilage, osteochondral, and soft loose body).

Steps (find it, stop inflow, out flow, fix it, grasp it and remove it).

VII. Meniscal lesions:

Anatomy of menisci and vasculature.

Types of meniscal injury (longitudinal, transverse, radial, flap tear, basket handle, and complex tear).

Partial meniscectomy.

Meniscal trimming.

VIII. Osteoarthritis:

Incidence (80% over the age of 60).

Pathologies (articular cartilage wear more than tear).

Classification (primary, secondary).

Arthroscopic procedure ( lavage, debridment of ulcers, loose body rewoval, partial synovectomy, abrasion arthroplasty and micro fracture).

Indications of high tibial osteotomy and total knee replacement.

IX. ACL reconstruction:

Diagnosis (clinical tests, and MRT).

Type of graft (bone patellar tendon, bone, semitendinosis and gracilis, and all graft).

Fixation methods (interference screen, transverse fixation devices, staples and fixation post).

Technique (anatomic points, drilling tunnels, graft placement and fixation).

Rehabilitation after reconstruction.

X. Meniscal repair and cartilage repair:

indication of meniscal repair (peripheral meniscal tears in red-red zone).

Technique of meniscal repair (manual from outside in or inside-out, or with pre-made sutures like fas & T-fix & arrows).

Indication of cartilage repair (osteocondritis dissicans and ostochondral traumatic defects).

Technique (mozacplasty of OATs).

XI. Complications of arthroscopy:

thrombo embolism.

Leakage of fluids.

Breakage of instruments intra artucular.

Infection.

Sympathetic osteodystrophy.

Practical Training:

The practical training and teaching will be in the form of lectures, videos, hand on skills on knee mod for basic diagnostic arthroscopy, loose body extraction, partial menisectomy, meniscal repair and AC reconstruction. This as well as assisting in life operative in the operating theaters.

Needs assessment:

AUCEST will continue to assess the needs of basic and advanced program in these of training and overall program needs. Safe techniques for arthroscopic skills are an essential part of knee surgeries. Last but not the least, these is no substitute for thorough training and the surgeon's discretion regardi case selection and decision making.