

## TERMS / UNITS

There will be a rotation of residents in 10 units & each resident will get an opportunity to work in respective units as follows.

| <b>Sr. No</b> | <b>Name of the unit</b>               | <b>M.S. (Ortho)<br/>(Months)</b> |
|---------------|---------------------------------------|----------------------------------|
| 1             | Trauma                                | 10                               |
| 2             | Knee                                  | 6                                |
| 3             | Hip                                   | 2                                |
| 4             | Spine                                 | 6                                |
| 5             | Paediatrics                           | 2                                |
| 6             | Shoulder                              | 2                                |
| 7             | Hand                                  | 2                                |
| 8             | Ortho-Onco/Rheumatology/ Foot & Ankle | 2                                |
| 9             | General Medicine & Neurology          | 2                                |
| 10            | OT Resident                           | 1                                |
| 11            | Study Leave                           | 1                                |
|               | <b>Total</b>                          | <b>36</b>                        |

Residents will follow the unit consultants as per scheduled of the unit to OPD, IPD or Operation Theatre. They have to complete indoor papers, carry out ward work as directed by consultants. Residents will get chance to assist senior surgeons in OT.

**Resident should carry a small pocket diary to note down the points during the rounds.**

**Do NOT carry out in following for first SIX months (STRICTLY):**

- **Doing independent dressing**
- **Patient Counselling**
- **Paperwork of any sort**
- **Un-supervised work in casualty / Operation Theater / ICU.**

# TOPICS AND SURGICAL PROCEDURES (UNIT WISE)

## Topics and Surgical procedures (Videos) to be completed during each posting

### **I. TRAUMA UNIT**

#### **A. General trauma**

1. Stages of Fracture Healing
2. Principles and application of Splints, Cast, Slabs
3. Skeletal traction-Upper Tibial, Distal Tibial, Distal Femur, Calcaneal, Tongs
4. Plates -Principles, Types and application
5. Intramedullary Nailing -Principles, Types, Application
6. Femur/Tibia/Peri-trochanteric
7. Tension Band Principles (plating/wiring)
8. Damage control orthopaedics
9. External Fixator -Types, Instrumentation, Applications
10. Screws in Orthopaedics -Types, Principles, Applications
11. AO classification

#### **B. Upper extremity-**

1. Clavicle, Scapula & Acromioclavicular joint (Fracture classification, Surgical approaches, Fixation methods)
2. Proximal humerus fracture & Dislocations (Fracture Classification, Surgical approaches, Fixation methods)
3. Humerus shaft fracture (fracture classification, Surgical approaches, Fixation methods (plate, intramedullary nail, MIPO plating, TENS)
4. Fractures around the Elbow (fracture classification, surgical approaches, fixation methods dual plating, single column plating, external fixator application.)
5. Forearm fracture (Surgical approaches, Fixation methods- Plating, Nail)
6. Distal end radius fracture  
(Fracture classification, Fixation modalities k wire, plating, dorsal plating, Ligamentotaxis)

#### **C. Lower extremity-**

1. Acetabulum, Femoral head fracture and dislocation (Fracture classification, Emergency management, external fixator application, Surgical approaches)
2. Pelvic ring fractures (Classification, emergency management, surgical approaches, external fixator application)
3. Proximal femoral fractures (Intracapsular, Intertrochanteric, Subtrochanteric) DHS, PFN, Pinning (Classification, Approaches, Setting up of fracture table, implant options)
4. Femoral shaft fractures (Classification, Fracture table / lateral position, Implant options)
5. Distal femoral fractures-(Classification, Surgical approaches, Implant options, Intramedullary nail/ plating/ medial plating)
6. Proximal tibia fractures-(Classification ,Column concept, Implant available, Surgical approaches) and Knee dislocation
7. Tibia shaft fracture(Classification, Surgical approaches, Implant options)

8. Distal tibia fracture- (Classification, Surgical approaches, Implant options, External fixator application)
9. Talus, Calcaneum, Tarsal and Metatarsal Fractures (Classification, Surgical Approaches, Fixation Methods)
10. Mid Foot injury- 3 column concept
11. Lisfranc injury and their management
12. Evaluation and fixation of syndesmotom injuries

## **II. SPINE UNIT**

1. Surgical anatomy of spine-cervical /thoracic/lumbar
2. Spine examination – Ex, TB spine, cervical myelopathy, PIVD, LCS
3. Video demonstrating examination and elicit signs in cervical myelopathy
4. Imaging (Xrays/ CT Scan/ MRI) – reading & understanding
5. Spinal fractures classification and management (cervical/ thoracic/ lumbar)
6. Lumbar, facet & root blocks (video)
7. Facet joint injection/ caudal epidural/ TFESI
8. Posterior approach to lumbar/ cervical spine
9. Pedicle screw insertion (thoracic, lumbar) (video)
10. TLIF (video)
11. PLIF (video)
12. Videos of transpedicular biopsy
13. Lumbar and cervical laminectomy
14. Lumbar microdiscectomy for prolapsed intervertebral disc
15. Anterior cervical discectomy and fusion (ACDF)
16. Lumbar decompression
17. SI joint injections
18. Spondylolisthesis
19. Spondylolisthesis reduction
20. Tubular discectomy
21. Cervical – lateral mass screw insertion
22. Transpedicular decompression for spine TB
23. Vertebroplasty
24. How to measure Cobb angle? Classify scoliosis
25. Deformity correction in scoliosis

## **III. HIP UNIT**

1. Anatomy of Hip – Osseous and Neuromuscular
2. History & Clinical examination
3. Pre-operative templating for THR
4. Surgical Approaches in Total Hip Replacement – Posterior/Lateral/Anterior
5. Partial Hip Replacement
6. Total Hip Replacement-Cemented & Uncemented
7. Osteotomies around the Hip

8. Excision Arthroplasty/Girdlestone Arthroplasty
9. Peri-prosthetic fractures around Hip
10. Core decompression
11. Surface Replacement

#### **IV. KNEE UNIT:**

1. Anatomy of Knee Joint
2. Clinical Evaluation of Knee Joint
3. Biomechanics of Knee
4. Basic Arthroscopy ( Diagnostic)
5. ACL Reconstruction
6. Complications of ACL reconstruction
7. PCL reconstruction
8. Complications of PCL reconstruction
9. Meniscus tear management
10. Meniscal transplant –Allograft/Prosthetic
11. Arthroscopic Synovectomy
12. Aspiration and Intraarticular injection of knee
13. Arthroscopic ACL avulsions fracture fixation
14. Open PCL avulsion fracture fixation
15. Arthroscopic MPFL reconstruction
16. Open MCL repair
17. PLC reconstruction
18. Chondral defects repair techniques (Microfracture/Abrasion Chondroplasty, Mosaicplasty, BMAC)
19. Graft Options-Hamstring ,BTB, Peroneus, Quadriceps,
20. High Tibial Osteotomy
21. Distal Femoral Osteotomy
22. Total Knee Replacement
23. Complications of TKR
24. Revision TKR
25. Unicondylar Knee Replacement

#### **V. HAND UNIT**

1. Anatomy of the muscles of the upper limb
2. Examination of hand and wrist
3. Examination of peripheral nerves of the upper limb
4. Distal end radius fractures (K wires, ORIF plating)
5. Scaphoid Fractures: Percutaneous and ORIF Techniques
6. Carpal tunnel, Dequervains, Trigger finger operative techniques
7. TFCC injuries and their management
8. Kienbock disease-Staging and Management
9. Local flaps hand injuries (Thenar flap Moberg lap, Cross finger flap)
10. Phalanx and Metacarpal Fractures-K-wire/Plate/External fixator

## **VI. PLASTIC UNIT:**

1. Basic suturing techniques
2. Skin grafting
3. Tendon repair
4. Vessel repair
5. Nerve repair
6. Wound healing & dressing techniques

## **VII. SHOULDER UNIT**

1. Clinical examination of shoulder
2. Anatomy of Shoulder
3. Surgical approaches in Shoulder
4. Steps of Bankart Repair
5. Steps of Rotator Cuff repair
6. Steps of Latarjet surgery
7. Steps of SLAP tear repair
8. Surgical steps in Shoulder replacement and Reverse Shoulder arthroplasty

## **VIII. PEDIATRIC ORTHOPAEDICS UNIT:**

1. Anatomy & Histology of Physis
2. Age of appearance of Secondary ossification Centers: Closure of Physis in Upper limb/lower limb.
3. Percentage of growth contributed by each physis to overall limb length
4. Forearm fracture Types. Mechanism, Treatment
5. Lateral condyle fractures - classification, Management
6. Monteggia fractures.
7. Septic Arthritis Diagnosis Management
8. Acute & Chronic Osteomyelitis.
9. Salter Harris classification of Physeal injuries.
10. Why Ponseti works & concept of kinematic coupling in CTEV management
11. Basics of Perthes disease
12. Clinical examination & treatment algorithm in DDH
13. Clinical examination & management of SCFE
14. Reduction technique in Supracondylar humerus fracture (Arm Board video technique)
15. Clinical examination in cerebral palsy

## **IX. FOOT AND ANKLE UNIT**

1. Evaluation of Heel Pain
2. Flat foot-Adult & Acquired and Paediatric
3. Corn and Callosities
4. Forefoot Deformity

5. Evaluation of Diabetic foot
6. Evaluation of Rheumatoid foot
7. Prescription of Orthotics & Prosthetics
8. Fracture fixation of ankle in diabetic and neuropathic joint
9. Calcaneal Osteomyelitis
10. TendoAchilles ruptures-Acute & Chronic
11. Treatment principles of ankle sprain
12. Hammer and claw toe correction
13. Hallux valgus correction
14. 1st MTPJ fusion
15. Midfoot fusion
16. Subtalar joint fusion
17. Talonavicular joint fusion
18. Calcaneocuboid joint fusion
19. Ankle arthroscopy diagnostic and therapeutic
20. Arthroscopic ankle fusion
21. TTC fusion
22. ATFL repair
23. Plantar Fasciitis, Calcaneal Spur- Management
24. Retrocalcaneal Bursitis-Management
25. Haglunds excision and TA repair
26. FHL transfer surgery

#### **X. ORTHO-ONCOLOGY UNIT**

1. Common Bone tumors-Clinical presentation and Radiology
2. Work Up of bone and soft tissue tumors
3. Classification and Staging of Bone Tumors
4. Biopsy principles and techniques
5. Limb Salvage surgery principles and various options
6. Management of benign bone tumors including GCT, Chondroblastoma, Osteochondroma, Osteoid Osteoma, ABC, UBC
7. Understand Role of chemotherapy and radiation therapy
8. Tumor Prosthesis

#### **XI. OFFICE ORTHOPAEDICS**

1. Biceps tendinitis
2. Tennis elbow
3. Carpal tunnel syndrome
4. Local hydrocortisone injection-knee
5. Complex regional pain syndrome/reflex sympathetic dystrophy
6. Ganglion excision
7. Heel pain/planter fasciitis
8. Iliotibial band syndrome
9. Sacroilitis

10. Dequervians tenosynovitis
11. Golfer's elbow
12. Trigger finger
13. Stress fracture
14. Tendonopathy
15. Frozen shoulder

## **XII. RHEUMATOLOGY UNIT**

1. Drug therapy in RA
2. Drug therapy in gout
3. Seronegative spondyloarthropathy
4. DMARD's in inflammatory disorders
5. Biological agents in RA/ Inflammatory disorders
6. Pathophysiology of RA
7. Diagnosis and Investigations in RA/ JRA

## **XIII. NEUROLOGY UNIT**

1. Clinical assessment of neuropathy
2. Management of head injury
3. Diabetic neuropathy
4. Non compressive myelopathy
5. Electrodiagnostic studies indications and interpretations

## **XIV. GENERAL MEDICINE**

1. Geriatric hip fracture optimization
2. Fitness assessment for surgery
3. Diabetes assessment and basic management
4. DVT prophylaxis
5. Analgesic NSAID's prescriptions Dos/ Donts
6. Pulmonary embolism management
7. Code blue response measures
8. Systemic inflammatory response syndrome
9. Fat embolism management