

THE UNIVERSITY OF JORDAN
FACULTY OF MEDICINE
DEPARTMENT OF SPECIAL SURGERY

ROTATION OUTLINE

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| Classification: | Medicine |
| Course Code: | 0506501 |
| Course Title: | Orthopedics |
| Year Level : | 5 th . Year |
| Round Schedule: | Arranged by individual teachers |
| Duration (Weeks): | 4 Weeks |
| Tutorial schedule | 8am-5pm (sun-thurs) |
| Credit Hours | 4 |
| Course Coordinator: | Dr. Jihad Al-Ajlouni |
| Prepared by: | Dr. Jihad Al-Ajlouni |
| Date of Outline Preparation: | 19-05-2005 |
| Date of Last Revision: | 29-11-2012 |
| Checked by: | Members of Department |
| Approved by Head of Department: | Dr. Jihad Al-Ajlouni |

I. Rotation Description

This is a four week clinical rotation for fifth year medical students during which the students will be introduced to general orthopedic disorders. They are required to attend from 8 am to 5 pm 5 days a week. Student will be exposed to outpatients, inpatients as well as orthopedics surgical operations.

Students at the end of the course are expected to have covered all aspects regarding assessing fractures, general management and complications of fractures, evaluation and assessment of orthopedic disorders affecting bone and joints are also covered. Students are trained to obtain relevant history and to perform physical examination of patients with common musculoskeletal disorders. General management of common orthopedic problems is also covered. Throughout the course, students will be involved in the daily morning report, clinical rounds, outpatient clinics and interactive seminars.

II. Rotation Objectives

By the end of this course, students are expected to:

1. To take proper history and perform physical examination.
2. To investigate patients with orthopedic disorders.
3. To know types of fractures, their classifications, and complications.
4. To know a wide spectrum of orthopedic diseases.
5. To impart the principles of diagnosis and management of Orthopedics disorders.

III. Rotation Expected Outcomes

Upon the completion of the orthopedics course students shall demonstrate the ability to:

- Perform a musculoskeletal extremity exam for the major anatomic areas – shoulder, wrist, hip, knee, and ankle.
- Interpret musculoskeletal x-rays of common fractures and degenerative conditions.
- Assess patients with overuse, degenerative, and traumatic problems and describe treatment options.
- Access pertinent information concerning musculoskeletal patient care.

- Demonstrate personal attributes of respect, compassion, honesty, dedication, motivation, perseverance, dependability, tolerance and adaptability with patients, their families and those with whom they work.

IV. Suggested Textbook(s) and Readings

- Apley's Orthopedics and fractures.
- McRae Physical Examination (Orthopedics).
- Review Orthopedics.
- Adam's: Outline of orthopedics.
- Adam's: Outline of fractures.
- MacRae's: Clinical evaluation.

V. Teaching Materials Made Available to Students:

- Textbooks and references
- Lecture Notes, from seminars prepared by the students and moderated by the consultants and teaching assistants.
- Attending outpatient clinics and learn examination methods after seeing patients, supervised by consultants and residents.

VI. Educational Facilities

- Classroom with whiteboard.
- College library.
- Internet.

VII. Rotation Outline

The following topics will be covered in this rotation:

| No. | Topic | Objectives |
|-----|---|--|
| 1 | Principles of fractures classification & evaluation | <ul style="list-style-type: none"> - Definitions of fracture, dislocation. - Fracture description (open vs. closed, simple vs. comminuted, complete vs. incomplete) - Fracture patterns (transverse, oblique, spiral...etc) - Special types of fractures (stress, pathological...etc) |
| 2 | Principles of fracture management | <ul style="list-style-type: none"> - Reduction techniques - Immobilization (splint, traction, external & internal fixation) with details about each of them - Open fractures management - Rehabilitation principles |
| 3 | Bone healing | <ul style="list-style-type: none"> - Normal bone physiology - Types of bone formation - Steps of fractures healing (inflammation, repair, soft callus formation, hard callus formation, remodelling) - Failure of fractures healing |
| 4 | Upper limb fractures-1 | <ul style="list-style-type: none"> - Upper limb anatomy review - Forearm fractures (classification, complications & management) - Wrist fractures (classification, complications & management)\ - Hand injuries (fractures & dislocations) - |
| 5 | Upper limb fractures-2 | <ul style="list-style-type: none"> - Shoulder fractures (fractures of the clavicle, fractures of the scapula) - Shoulder dislocation (types, diagnosis & management) - Humerus fractures (classification, complications & management) - Fractures of proximal radius. - Fractures of Olecranon process. |

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| 6 | Lower limb fractures & injuries | <ul style="list-style-type: none"> - Lower limbs anatomy review - Hip dislocation - Femoral fractures (classification, complications & management) - Patellar dislocation & fracture - Tibial fractures(classification, complications & management)\ - Knee dislocation - Ankle fractures - |
| 7 | Pelvic fractures | <ul style="list-style-type: none"> - Types of pelvic fractures - Mechanism of injury - Complications - Management |
| 8 | Osteoarthritis | <ul style="list-style-type: none"> - Definition - Epidemiology - Pathophysiology - Clinical features - Investigations - Management |
| 9 | Total knee replacement & total hip replacement | <ul style="list-style-type: none"> - Definition - Indications - Contraindications - Complications - Post-op follow up - |
| 10 | Osteochondrosis | <ul style="list-style-type: none"> - Definition - Types - Etiology - Clinical manifestations - Imaging studies - Management |
| 11 | Osteochondritis Dissecans (OCD) | <ul style="list-style-type: none"> - Definition - Etiology - Pathophysiology - Clinical features - Investigations - Management |
| 12 | Knee disorders | <ul style="list-style-type: none"> - Anatomy review - Genu varum & Genu valgum - Meniscal injury - Loose bodies - Plica syndrome - Patellofemoral disorders - Swellings around the knee |
| 13 | Spinal disorders | <ul style="list-style-type: none"> - Approach to low back pain - Prolapsed intervertebral disc - Spondylolisthesis - Spinal stenosis |

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| | | - Ankylosing spondylitis |
| 14 | Kyphosis | <ul style="list-style-type: none"> - Definition - Etiology - Forms of kyphosis - Clinical features - Investigations - Management |
| 15 | Scoliosis | <ul style="list-style-type: none"> - Definition - Etiology - Types of scoliosis - Clinical features - Investigations - Management |
| 16 | Hand infections | <ul style="list-style-type: none"> - Acute hand infections (paronychia, felon, herpetic Whitlow, other subcutaneous infections, suppurative tenosynovitis, deep fascial space infections, joint infections). - Bites - Fungal infections. |
| 17 | Metabolic bone disorders | <ul style="list-style-type: none"> - Normal bone structure - Normal calcium/phosphate metabolism - Vitamin D metabolism - Metabolic bone disorders (osteomalacia, rickets, osteoporosis, osteitis fibrosa, endocrine disorders) |
| 18 | Benign bone tumors | <ul style="list-style-type: none"> - Classification. - Presenting symptoms. - Diagnostic techniques. - Differential diagnosis of bone tumors. - Principles of treatment |
| 19 | Malignant bone tumors | <ul style="list-style-type: none"> - Types - Radiological features - Diagnosis - Principles of management |
| 20 | Orthopedic rehabilitation | <ul style="list-style-type: none"> - General principles in rehabilitation - Spasticity management - Evaluation of impairment - Neurological impairment and recovery |
| 21 | Trauma rehabilitation | <ul style="list-style-type: none"> - Spinal cord injuries - Neurological impairment and recovery - Principles of physiotherapy - Heat therapy |
| 22 | Amputation | <ul style="list-style-type: none"> - General principles of amputation - Types of amputation |
| 23 | Gait disorders | <ul style="list-style-type: none"> - Normal gait cycle - Gait disorders - Gait analysis & its role in management of gait disorders |
| 24 | Back pain | <ul style="list-style-type: none"> - Etiology & pathophysiology |

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| | | <ul style="list-style-type: none"> - History & physical examination - Imaging studies - Principles of treatment |
| 25 | Osteomyelitis & septic arthritis | <ul style="list-style-type: none"> - Types of osteomyelitis (acute, subacute & chronic) - Osteomyelitis caused by open fractures - Squamous cell carcinoma caused by chronic osteomyelitis - Types of septic arthritis (acute & chronic) |
| 26 | Fractures in children | <ul style="list-style-type: none"> - Common pediatric fracture patterns - Epiphyseal fractures - Upper limb fractures - Lower limb fractures - Injuries related to child abuse |
| 27 | Pediatric foot | <ul style="list-style-type: none"> - Anatomical review - Common pediatric foot disorders & management - Imaging studies |
| 28 | Pediatric hip | <ul style="list-style-type: none"> - Transient synovitis of the hip - Developmental dysplasia of the hip (risk factors, clinical findings, imaging studies & management) - Legg-clave-perthes disease - Slipped capital femoral epiphysis |
| 29 | Peripheral nerve injury | <ul style="list-style-type: none"> - Anatomy - Diagnostic studies - Compressive neuropathies: <ul style="list-style-type: none"> 1- Median nerve 2- Ulnar nerve 3- Radial nerve 4- Thoracic outlet syndrome 5- Cervical root compression |

VIII. Instructional Methods

- Morning report.
- Seminars.
- Bed-side teaching.
- Outpatient clinics.
- Homework and Quizzes.
- Case Studies.

- Problem solving sessions.

IX. Student Rotation Evaluation Methods

Evaluation will be done based on the following:

- Attendance of clinics and seminars.
- In course evaluation (taking history and performing physical examination).
- Preparing seminars, and sharing in discussions.
- Behavior and relation to staff (including nurses and residents).
- Quizzes.
- Homework assignments.
- Examination

X. Major Evaluation Dates

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| Rotation Final Evaluation | Short cases - End of Rotation (4 th Thursday) |
| End of Year Final Exam | Written (multiple choice questions) |

THE UNIVERSITY OF JORDAN

FACULTY OF MEDICINE

DEPARTMENT OF SPECIAL SURGERY

ROTATION OUTLINE

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|--|--------------------------------------|
| Classification: | Medicine |
| Course Code: | 0506501 |
| Course Title: | Ophthalmology |
| Year Level : | 5 th year |
| Credit Hours : | 2 |
| Round Schedule: | Arranged by individual teachers |
| Tutorial Schedule | 8am-5pm (Sunday-Thursday) |
| Duration (Weeks): | 2 Weeks for each group (20 groups) |
| Course Coordinator: | Prof. Dr. Muawyah Al-Bdour |
| Prepared by: | Prof. Dr. Muawyah Al-Bdour |
| Date of Outline Preparation: | 19-05-2005 |
| Date of Last Revision: | 29-11-2012 |
| Checked by: | Members of Department |
| Approved by Head of Department: | Members of Department |

I. Rotation Description

The Material covers the following:

1. Pathophysiological basis of symptoms and signs related to eyeball, adnexia, extraocular muscles, orbit and optic nerve.
2. Refractive errors: types, causes and principles of treatment.
3. Causes and manifestations of common ophthalmic diseases: cataract, conjunctivitis, diabetic retinopathy, retinal vein occlusion, strabismus uveitis, keratopathies, lid masses, lid malposition lacrimal obstruction, optic neuropathies and pupil abnormalities.
4. Causes and manifestations of eye injuries.
5. Basic diagnostic tools used in ophthalmology: torch, direct ophthalmoscope, slit lamp, Snellen chart and pinhole.

II. Rotation Objectives:

This is a course designed for fifth year medical students to become familiar with basic ophthalmologic concept to help him / her in his career later on.

It is intended to introduce the student to the common ophthalmic disease entities and its management as well as the examination skills required for diagnosis.

III. Rotation Expected Outcomes:

Upon the completion of the Ophthalmology course students shall demonstrate the ability's to:

1. Take proper ophthalmic History.
2. Perform basic ophthalmic diagnostic procedures (pupil examination, Extraocular motility, eye lid, Anterior segment, evaluation, Fundus examination, refraction Examination).
3. Use different ophthalmic instruments (slit lamp, Ophthalmoscope, lenses).
4. Put Differential diagnosis for different eye diseases.
5. Understand the ocular pharmacology and the uses of eye drops.
6. Understand the indications for laser and surgical treatment in ophthalmology.
7. Understand the basic concepts of visual optics.

IV. Suggested Textbook(s) and Readings:

1. Lecture Notes in Ophthalmology.

Authors: B James, C Chew, A Bron.

Publisher: BH

Eighth Edition

2. Ophthalmology, An Illustrated Color Text.

Authors: M Butterbury, B Bowling

Publisher: Churchill Livingstone

3. Clinical Ophthalmology.

Author: J. Kanski

Publisher: BH

Fifth Edition

V. Teaching Materials Made Available to Students:

1- Textbook and references

2- Lecture Notes, from seminars prepared by the students and moderated by the consultants and teaching assistants.

3- Attending outpatient clinics and learn examination methods after seeing patients, supervised by consultants and residents.

VI. Educational Facilities:

-Classroom with whiteboard.

-College library.

-Internet.

VII. Rotation Outline:

The following topics will be covered in this rotation:

| Topic | Number of Hours |
|---|------------------------|
| 1. Ocular history & Examination. | 1 |
| 2. Fundoscopy. | 1 |
| 3. Conjunctiva & Differential Diagnosis of Red Eye. | 1 |
| 4. Lids & Lacrimal System. | 1 |
| 5. Diseases of the cornea & sclera. | 1 |

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| 6. Diseases of the lens. | 1 |
| 7. Glaucoma. | 1 |
| 8. Optic & refraction. | 1 |
| 9. Pupillary Reflexes. | 1 |
| 10. Optic Nerve Diseases. | 1 |
| 11. Diabetic Retinopathy. | 1 |
| 12. Uveitis. | 1 |
| 13. Vitreous & Retina. | 1 |
| 14. Eye injuries. | 1 |
| 15. Strabismus. | 1 |
| 16. Orbital Diseases. | 1 |
| 17. Tumors of the Eye. | 1 |
| 18. Loss of Vision. | 1 |

VIII. Instructional Methods:

- Seminars.
- Clinics & discussing cases.
- Videos.

IX. Student Rotation Evaluation Methods:

Evaluation will be done based on the following:-

- Attendance of clinics and seminars.
- In course evaluation (taking history and picking up signs by use of slit lamp and direct ophthalmoscope).
- Preparing seminars, and sharing in discussions.
- Behavior and relation to staff (including nurses and residents)

X. Major Evaluation Dates

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|---------------------------|-------------------------------------|
| Rotation Final Evaluation | End of Rotation (see above) |
| End of Year Final Exam | As suggested by University Calendar |

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ROTATION OUTLINE

| | |
|--|---------------------------------|
| Classification: | Medicine |
| Course Code: | 0506501 |
| Course Title: | Ear, Nose, and Throat |
| Year Level : | 5 th . Year |
| Round Schedule: | Arranged by individual teachers |
| Duration (Weeks): | 2 Weeks |
| Tutorial schedule | 8am-5pm (sun-thurs) |
| Credit Hours | 2 |
| Course Coordinator: | Dr. Khader J. Abdul-Baqi |
| Prepared by: | Dr. Khader J. Abdul-Baqi |
| Date of Outline Preparation: | 19-05-2005 |
| Date of Last Revision: | 29-11-2012 |
| Checked by: | Members of Department |
| Approved by Head of Department: | Dr. Khader J. Abdul-Baqi |

I. Rotation Description:

This is a two week course for 5th year medical students, where they attend from 8 am to 4 pm 5 days a week. Student will have the opportunity to assist in the clinic, as well as observe in the theatre.

The Material covers the following:

1. Common symptoms and signs of ear, nose and throat disease; their pathophysiology and management.
2. Causes, manifestations and management of common Infections of the ear, nose and throat such as: Rhinosinusitis, Otitis Media and Externa, Tonsillitis.
3. Causes and approach to neck masses (form a surgical point of view).
4. Causes and management of tinnitus and vertigo.
5. Basic introduction to tumors of nose, larynx, pharynx and their clinical approach.

II. Rotation Objectives:

This course is part of the special surgery course designed for 5th year medical students. Its main aim is to familiarize the students with common emergent and non-emergent situations related to the field of Otorhinolaryngology, and which students are expected to face in their practice later on.

III. Rotation Expected Outcomes:

Upon completion of the ENT course, students shall demonstrate the ability to:

1. Take appropriate history and perform focused physical examination of the ear, nose and throat.
2. Appropriately Use instruments and tools that they need in examining the patient in the ENT clinic such as: Otoscope, Tuning Fork, nasal speculum, tongue depressor.
3. Interpret tympanometry and audiometry graphs as well as imaging studies.
5. Know how to deal with emergency situations related to the ear and nose, such as foreign body removal and epistaxis management.
6. Perform basic procedures such as: Foreign body removal form nasal cavity or external auditory meatus, aural toilet.

7. Demonstrate personal attributes of respect, compassion, honesty, dedication, motivation, perseverance, dependability, tolerance and adaptability with patients, their families and those with whom they work.

IV. Suggested Textbook(s) and Readings:

1. Lecture Notes: Diseases of the Ear, Nose and Throat, 10th edition.
Authors: Peter Bull, Ray Clarke.
Publisher: Blackwell
2. Color Atlas of ENT Diagnosis, 5th edition.
Authors: Tony R.Bull, John Almeyda.
Publisher: Thieme
3. Current Diagnosis and Treatment: Otolaryngology, Head and Neck surgery, 2nd edition.
Authors: Anil K.Lalwani
Publisher: McGrawHill.
4. Basic Otorhinolaryngology.
Authors: Rudolf Probst, Gerhard Grevers.
Publisher: Thieme.

V. Teaching Materials Made Available to Students:

- Textbook and references.
- Lecture Notes, from seminars prepared by the students and moderated by the consultants and teaching assistants.
- Attending outpatient clinics and learn examination methods after seeing patients, supervised by consultants and residents.

VI. Educational Facilities:

- Classroom with whiteboard.
- Access to special ENT test exam rooms.
- College library.
- Internet.

VII. Rotation Outline:

The following topics will be covered in this rotation:

| NO. | Topic | Objectives |
|-----|---|---|
| 1. | Introduction in ENT & Examination | <ul style="list-style-type: none"> - Revising the basic surgical anatomy of ear, nose and throat. - Taking appropriate, systematic history and performing a focused physical examination on ears, nose and throat. |
| 2. | Introduction to Audio- and Tympanometry. | <ul style="list-style-type: none"> - Interpreting audiometry and tympanometry graphs. - Create a Differential diagnosis list of the different patterns of Audiometry/Tympanometry. |
| 3. | Otitis Externa and External ear conditions | <ul style="list-style-type: none"> - Definition. - Types. - Causative organisms. - Clinical features. - Investigations. - Management. - Prevention. |
| 4. | Acute and Chronic Infective Rhinosinusitis. | <ul style="list-style-type: none"> - Classification/Types. - Epidemiology. - Etiology. - Clinical Presentation. - Management. - Indications for surgical management. - Complications. |
| 5. | Adenoids, Tonsillitis and Pharyngitis. | <ul style="list-style-type: none"> - Types of Tonsillitis. - Causative agents. - Symptoms and signs of acute tonsillitis. - Differential Diagnosis. - Management. - Complications. - Tonsillectomy: Indications, contraindications and complications. |
| 6. | Assessment of Hearing in children. | <ul style="list-style-type: none"> - Epidemiology - Causes - Types of hearing loss: Conductive VS sensorineural. - Risk Factor - Hearing Testing - Normal hearing response and normal speech in children Physiologic hearing tests - Management |
| 7. | Deafness in Adults | <ul style="list-style-type: none"> - Types of hearing loss: Conductive VS sensorineural. - Investigations for hearing loss. - Treatment for hearing loss. - Causes, pathophysiology and management of tinnitus. |
| 8. | Acute Otitis Media and Secretory Otitis Media | <ul style="list-style-type: none"> - Definition and types - Etiology and Epidemiology. - Pathophysiology. - Presentation. - Diagnosis and Investigations. |

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| | | - Management. |
| 9. | Chronic non-infective Rhinosinusitis and nasal polyps | <ul style="list-style-type: none"> - Definition and causes of Chronic Rhinosinusitis - Presentation. - Diagnosis and Investigations. - Management. - Types of nasal polyps. - Pathogenesis of nasal polyps. - Diagnosis and management of nasal polyps. - Types of nasal polyps. - Pathogenesis of nasal polyps. - Diagnosis and management of nasal polyps. - Benign nasal tumors. - Malignant nasal tumors. |
| 10. | Tinnitus and Foreign Bodies | <ul style="list-style-type: none"> - Definition and causes of Tinnitus - Presentation. - Diagnosis and Investigations. - Management of Tinnitus. - Ear foreign bodies. - Nasal foreign bodies. - Throat foreign bodies. - Pharyngeal and laryngeal foreign bodies. - Emergent management. - Complications. |
| 11. | Epistaxis and Nasal Trauma | <ul style="list-style-type: none"> - Blood supply to nose. - Causes of epistaxis. - Evaluation and management of a patient with epistaxis. - Nasal fractures: diagnosis, management and complications. - Maxillary and periorbital fractures: Lefort Classification, assessment and management. |
| 12. | Chronic (Suppurative) Otitis Media and Cholesteoma | <ul style="list-style-type: none"> - Types. - Etiology and pathophysiology. - Presentation. - Diagnosis and Investigations. - Management. |
| 13. | Nasal Masses | <ul style="list-style-type: none"> - Dermoid cyst - Meningocele - Benign nasal tumors. - Malignant nasal tumors. |
| 14. | Laryngeal tumors. | <ul style="list-style-type: none"> - Risk factors. - Clinical presentation. - TNM classification. - Clinical assessment and investigations. - Management (Surgical VS Radiotherapy). - Prognosis. |
| 15. | Stridor and Tracheostomy | <ul style="list-style-type: none"> - Definition. - Causes and differential diagnosis. - Management. - Tracheostomy: Technique, indications and complications. |

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| 16. | Vertigo | - The vestibular system: anatomy and physiology. - Defining Vertigo. - Classification of vertigo: Central VS peripheral. - Assessment of vestibular system: History taking and physical examination maneuvers. |
| 17. | Neck masses. | - Creating a differential diagnosis for neck mass. - How to suspect a “malignant” neck mass. - Investigations. - Management (conservative VS surgical). |
| 18. | Pharyngeal Tumors | - Nasopharynx tumors. - Oropharynx tumors. - Hypopharynx tumors. - Oral Cavity tumors. |
| 19. | The nasal septum | - Septal deviation. - Septal perforation. - Septoplasty and Rhinoplasty. |

VIII. Instructional Methods:

- Seminars.
- Clinics & discussing cases.
- Videos.

IX. Student Rotation Evaluation Methods:

Evaluation will be done based on the following:

- Attendance of clinics and seminars.
- In course evaluation (taking history and picking up signs by use of Otoscope, penlight and tongue depressor).
- Preparing seminars, and sharing in discussions.
- Behavior and relation to staff (including nurses and residents).

X. Major Evaluation Dates:

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| Rotation Final Evaluation | Evaluation of both skills and theory (short cases). |
| End of Year Final Exam | Written (multiple choice questions). |

THE UNIVERSITY OF JORDAN

**FACULTY OF MEDICINE
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ROTATION OUTLINE

| | |
|--|---------------------------------|
| Classification: | Medicine |
| Course Code: | 0506501 |
| Course Title: | Urology |
| Year Level : | 5 th . Year |
| Round Schedule: | Arranged by individual teachers |
| Duration (Weeks): | 2 Weeks |
| Tutorial Schedule: | 8am-5pm (sun-thurs) |
| Credit Hours | 2 |
| Course Coordinator: | Prof. Mujalli Mhailan |
| Prepared by: | Prof. Mujalli Mhailan |
| Date of Outline Preparation: | 19-05-2005 |
| Date of Last Revision: | 29-11-2012 |
| Checked by: | Members of Department |
| Approved by Head of Department: | Prof. Mujalli Mhailan |

I. Rotation Description

This is a rotation of urology that exposes a student to general and specialty based urology. During the rotation, students learn the broad concepts and specific data regarding the evaluation, diagnosis, and management of the common diseases of the genitourinary tract. Students in this rotation are an integral part of the service. Every effort is made to provide students with as much personal contact with faculty and residents as is possible and appropriate for positive patient care. The daily clinics give students a broad exposure to ambulatory urological care and provide them with an opportunity to take urologic histories and physicals, and have some exposure to genitourinary oncology, neurourology, infertility, stone diseases, urinary tract infections impotence and pediatric urology. Students are expected to take part in patient ward care and to attend at surgery on those patients observed on the ward. Students are expected to attend grand rounds and read suggested literature.

II. Rotation Objectives

Students will experience clinical urology through working directly with the urologic residents, taking case histories, assisting in the operating room, attending conferences, seminars and demonstrations, and interacting with the attending staff. The goals are the same as for the usual student rotation but in addition the students will be given more responsibility both in the clinic and in the OR. They will be expected to take night call one night per week with a different resident. They will be taught various basic urologic techniques and will be required to give one talk on a urologic subject of their own choosing during the rotation.

III. Rotation Expected Outcomes

After the clinical rotation in urology, all medical students will be expected to:

1. Understand the General Urological Principles.
2. Take a detailed urologic history and be able to adequately perform the Genitourinary Exam.
3. Perform a digital rectal examination of the prostate and learn to distinguish between prostate cancer and benign prostatic hyperplasia (BPH).
4. Perform and understand findings on a urinalysis (including microscopic assessment).
5. Understand the basic structure of inpatient as well as outpatient urology practice.
6. Understand the diagnosis and management of the following common urologic conditions like: (BPH and voiding dysfunction, Carcinoma of the prostate , Varying types of urinary incontinence , Erectile dysfunction , Renal masses , Urinary stone disease and the abnormalities of scrotal contents).

8. Being able to evaluate, work up and present patients in the outpatient clinic.

7. Describe how to do catheterization.

IV. Suggested Textbook(s) and Readings

1. Smith's General Urology

Authors: Jack W. McAninch, Tom F. Lue.

Edition: 18th.

2. Urology Board Review: Pearls of Wisdom

Authors: Stephen W. Leslie, MD, FACS

Edition: 3rd.

3. Oxford American Handbook of Urology.

Author: David M. Albala.

Edition: 1st.

V. Teaching Materials Made Available to Students

- Textbook and References.
- Seminars presented by students and supervised by consultants.
- Lecture Notes and presentations of urologic topics that are presented during the rotation.

VI. Educational Facilities

- Classroom with whiteboard.
- Video projection and other telecommunication facilities.
- College library.
- Internet Access.

VII. Rotation Outline

The following topics will be covered in this rotation:

| No. | Topic | Objectives |
|-----|-----------------------------------|---|
| 1 | Urological Presentation | Significance and preliminary investigation of urological symptoms and signs. - Hematuria: definition and types. - Haemospermia: definition, causes, investigation and treatment. - Lower urinary tract symptoms (LUTS). - Upper urinary tract symptoms. - Scrotal pain and Priapism. |
| 2 | Urinary Tract Infection | -Definitions, incidence and epidemiology. -Signs and symptoms. -Complicated VS Uncomplicated. -Investigations. -Treatment and Prophylaxis. |
| 3 | Urinary Tract Injuries | -Renal trauma: classification, mechanism, grading. -Penetrating Vs Blunt injuries. -Pediatric renal injuries -Clinical and radiological assessment. - Conservative Vs operative management. |
| 4 | Neurogenic Bladder & Urodynamics. | -Definition -Presentation. -Diagnosis and Urodynamics. -Conservative and behavior modification. -Options for failed conventional therapy. |
| 5 | Erectile Dysfunction | -Physiology of erection and ejaculation. - Anatomy of the Penis. - Impotence: definition, types, etiology and epidemiology. - Investigations and treatment. |
| 6 | Infertility | -Male reproductive physiology. -Etiology and evaluation of male infertility. -Investigation of male infertility (Basic and special investigations). - Management |
| 7 | Urological Investigations | -Urine Examination. -Urine Microscopy. |

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| | | <ul style="list-style-type: none"> -Urine Cytology. -PSA (Indication and Interpretation). - Radiological imaging of the urinary tract. |
| 8 | Pediatric Urology I | <ul style="list-style-type: none"> - Embryology: urinary tract. - Undescended testes. - Vesicoureteric reflux (VUR). - Ectopic ureter. - Ureterocele. |
| 9 | Pediatric Urology II | <ul style="list-style-type: none"> - Pelviureteric junction (PUJ) obstruction. - Hypospadias. - Epispadias. - Posterior urethral valves (PUVs). - Nocturnal enuresis |
| 10 | Renal Transplantation | <ul style="list-style-type: none"> - History - Indications - Contraindications and requirements. - Sources of kidneys. - Living donors. - Compatibility. - Procedure. - Complications. - Prognosis. |
| 11 | Stones Diseases | <ul style="list-style-type: none"> -Signs and symptoms. -Causes. -Pathophysiology (Supersaturation of urine and Inhibitors of stone formation). -Diagnosis (Imaging studies, Laboratory examination and Classification). -Prevention. -Management (Medical Vs Surgical). |
| 12 | Benign Prostatic Disease | <ul style="list-style-type: none"> -Signs and symptoms. -Cause. -Anatomy and Histology. -Diagnosis. -Management. -Medications. -Minimally invasive therapies. -Surgery. |
| 13 | Urinary Incontinence | <ul style="list-style-type: none"> -Causes. -Pathophysiology. |

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| | | <ul style="list-style-type: none"> -Diagnosis: Types In women. In men. -Treatment. -Exercises. -Medications. -Surgery. -Devices. |
| 14 | Genitourinary TB | <ul style="list-style-type: none"> -Overview of GUTB. -Causative Factors in GUTB. -Prevalence of GUTB. -Evaluation of GUTB. -Diagnosis of GUTB. -Routine Tests. -Urine Studies. -Semen Analysis and PSA. -Sputum Testing. -PPD Skin Test. -Investigations. -Treatment. |
| 15 | Benign Scrotal Pathologies | <ul style="list-style-type: none"> -Anatomy. -Pathophysiology. -Etiology of different pathologies. -Differentiation between different pathologies. -Epidemiology. -Prognosis. |
| 16 | Bladder & Urethral tumors | <ul style="list-style-type: none"> -Presentation. -Risk factors. -Investigations. -Staging. -Treatment options. -Prognosis. |
| 17 | Prostate Tumors | <ul style="list-style-type: none"> -Presentation. -Risk factors. -Investigations. -Staging. -Treatment options. -Prognosis. |
| 17 | Testicular Tumors. | <ul style="list-style-type: none"> -Overview -Presentation -DDx -Workup |

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| | | -Treatment -Medication -Follow-up |
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VIII. Instructional Methods

- Lecture/Problem solving sessions.
- Homeworks and Quizzes.
- Seminars.
- Case Studies

IX. Student Rotation Evaluation Methods

End of Course evaluations from the Attending Urologists (short cases) will be used to determine the students' grade in conjunction with their Grand Rounds Presentation. Adherence to attendance and general behavior are taken into consideration.

X. Major Evaluation Dates

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|---------------------------|-------------------------------------|
| Rotation Final Evaluation | End of Rotation (see above) |
| End of Year Final Exam | As suggested by University Calendar |

THE UNIVERSITY OF JORDAN
FACULTY OF MEDICINE
DEPARTMENT OF SPECIAL SURGERY
ROTATION OUTLINE

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|--|---------------------------------|
| Classification: | Medicine |
| Course Code: | 0506501 |
| Course Title: | Neurosurgery |
| Year Level : | 5 th . Year |
| Round Schedule: | Arranged by individual teachers |
| Duration (Weeks): | 2 Weeks |
| Tutorial schedule | 8am-5pm (sun-thurs) |
| Credit Hours | 2 |
| Course Coordinator: | Prof. Ahmad Tamimi |
| Prepared by: | Prof. Ahmad Tamimi |
| Date of Outline Preparation: | 19-05-2005 |
| Date of Last Revision: | 29-11-2012 |
| Checked by: | Members of Department |
| Approved by Head of Department: | Prof. Ahmad Tamimi |

I. Rotation Description:

This is a two week course for 5th year medical students, where they attend from 8 am to 5 pm 5 days a week. Student will have the opportunity to assist in the clinic, deal with inpatients as well as observe in the operating room.

This rotation exposes students to the full breadth of training experience, including morning rounds, surgical cases and clinical conferences. Although not required, students benefit from taking in-house call with the resident on call, where they are exposed to emergent as well as routine admissions and surgical procedures. Students are expected to deliver case presentations at our grand rounds.

II. Rotation Objectives:

1. This course is designed to provide students with basic, clinical knowledge and skills necessary to deal with common neurosurgical problems that they may encounter later in their career.
2. Helping students become clinically oriented in approaching neurosurgical emergencies safely and effectively.
3. Building Trust in students to deal with neurosurgical patients in a professional manner.
4. To know how to prepare clinical seminars throughout researching information, medical websites (e.g.: Uptodate.com), textbooks, and other references.
5. Improving presentation skills throughout talking for the audience and discussing clinical issues (throughout seminars)

III. Rotation Expected Outcomes:

Upon the completion of the neurosurgery course, students should be able to:

1. Use the basic knowledge and apply it in clinical cases .such as using Neuroanatomy in interpreting brain CT scan, using Neuroanatomy and physiology to localize the level of the lesion in the spinal cord and brain, and Using CSF physiology in understanding hydrocephalus.
2. Create a differential diagnosis list for common patient complaints (lower back pain, headache, seizures, altered level of consciousness, blurred vision ... etc)

3. Take appropriate history and perform a focused physical examination of the Neuro system to direct them to reach a diagnosis.
4. Assess the level of consciousness based on the Glasgow Coma Scale.
5. Order appropriate lab investigations in the appropriate clinical settings including indications and contraindications to lumbar puncture.
6. Order the suitable imaging study based on their differences in accuracy, safety and cost.
7. Writing a well organized patient plan based on the patient's problem list.
8. Applying the basic treatment principles of common neurosurgical emergencies such as head trauma subarachnoid hemorrhage (SAH), acute cord compression and cauda equina syndrome.
9. Demonstrate personal attributes of respect, compassion, honesty, dedication, motivation, perseverance, dependability, tolerance and adaptability with patients, their families and those with whom they work.

IV. Suggested Textbook(s) and Reading:

- Principles of Neurosurgery
Authors: Richard G. Ellenbogen MD
- Neurology and Neurosurgery Illustrated
Authors: Kenneth W. Lindsay MD

V. Teaching Materials Made Available to Students:

- Textbooks.
- Lecture Notes, from seminars prepared by the students and modified by the consultants and teaching assistants.
- Internet links and references (videos and studies)

VI. Educational Facilities:

- Classroom and whiteboard.
- College library.
- Internet.

VII. Rotation Outline and Seminars:

The following topics will be covered in this rotation:
(Presented by students, and discussed with the supervised professors)

| No. | Topic | Objectives | Supervised by |
|-----|------------------------------|--|-----------------|
| 1 | Introduction to Neurosurgery | 1- Basic concepts and orientation about the target of this rotation (Seminars, outpatients teaching clinic, teaching round and surgical activities) | Prof. A. Tamimi |
| 2 | Head Injury (I) | 1- Concepts 2- Epidemiology 3- Etiology 4- Classifications 5- Clinical features 6- Diagnosis 7- Management | Prof. W.Maani |
| 3 | Head Injury (II) | 1- Complications; early and delayed 2- Pathophysiology 3- Clinical features 4- Diagnosis 5- Management | Prof. W.Maani |
| 4 | Spinal Injury | 1- Concepts 2- Epidemiology 3- Etiology 4- Classifications 5- Clinical features 6- Diagnosis 7- Management | Dr.Q. Salih |

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| 5 | Degenerative disease of the Spine (I) | Cervical and thoracic disk 1- Epidemiology 2- Etiology 3- Classifications 4- Clinical features 5- Diagnosis 6- Management | Dr.Q. Salih |
| 6 | Degenerative disease of the Spine (2) | Lumber disk and spondylolisthesis 1- Epidemiology 2- Etiology 3- Classifications 4- Clinical features 5- Diagnosis 6- Management | Dr.Q. Salih |
| 7 | Spinal Tumors | 1- Epidemiology 2- Etiology 3- Classifications 4- Clinical features 5- Diagnosis 6- Management and Outcome | Prof. W.Maani |
| 8 | Subarachnoid Hemorrhage | 1- Concepts 2- Epidemiology 3- Etiology 4- Classifications 5- Clinical features 6- Diagnosis 7- Management | Dr. A. Shdifat |
| 9 | Intracranial Hypertension (HICP) | 1- Pathophysiology 2- Etiology 3- Clinical features 4- Diagnosis 5- Management | Prof. W.Maani |
| 10 | Brain Tumors (I) | 1- Epidemiology 2- Etiology 3- Classifications 4- Clinical features 5- Diagnosis 6- Management | Dr. A. Shdifat |

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| 11 | Brain Tumors (II) | Gliomas, meningiomas, pituitary adenomas, medulloblastoma 1- Epidemiology 2- Etiology 3- Classifications 4- Clinical features 5- Diagnosis 6- Management | Dr. A. Shdifat |
| 12 | Hydrocephalus | 1- Concepts 2- Etiology 3- Classifications 4- Clinical features 5- Diagnosis 6- Management | Dr. K. Kharazi |
| 13 | Spinal Bifidism | 1- Epidemiology 2- Etiology 3- Clinical features 4- Diagnosis 5- Management | Dr. K. Kharazi |
| 14 | Epilepsy Surgery | Refractory epilepsy 1- Concepts 2- Epidemiology 3- Diagnosis 4- Treatment 5- Outcome | Prof. A. Tamimi |

VIII. Instructional Methods:

- Seminars.
- Clinics & teaching rounds.
- Videos.

IX. Student Rotation Evaluation Methods:

Evaluation will be done based on the following:

- Attendance of clinics and seminars.
- In course evaluation (taking history and picking up signs).
- Preparing seminars, and sharing in discussions.
- Behavior and relation to staff (including nurses and residents).

X. Major Evaluation Dates:

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|------------------------|--|
| Rotation Final Exam | End of Rotation Clinical and Oral exams |
| End of Year Final Exam | Clinical theoretical exam at the end of the year |