**STUDY GUIDE**

**Subject of ENT**

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**Introduction:-**

Medical education is a life-long process and MBBS curriculum is a part of the continuum of education from pre-medical education, MBBS, proceeding to house job, and post-graduation. PM&DC outlines the guiding principles for undergraduate medical curriculum and has defined the generic competencies and desired outcomes for a medical graduate to provide optimal health care, leading to better health outcomes for patients and societies. These generic competencies set the standards of care for all physicians and form a part of the identity of a doctor. Each competency describes a core ability of a competent physician. This study guide will give an insight to the students about all these competencies and how to plan their educational activities in the subject of ENT during the period of two years.

**Details of the course**

Name of the course**:** ENT

Level of Students: 3rd and 4th-year MBBS

Total No of students: 150 +150

Total No of batches 6+6 (30 students in each batch)

Clinical subjects Coordinator: Prof. Athar Adnan Uppal (ENT)

Student’s Coordinator: Two students Selected one each from 3rd and 4th year

This module will run in parallel with other modules.

**Duration of the course**

Total of 180 hours will be spread over a period of two years. 81 hours (27 hours for 3rd Year & 54 hours for 4th Year) for whole class activity in the form of interactive lectures. 99 hours (54 hours for 3rd Year & 45 hours for 4th Year) for each clinical batches in clinical wards.

**Learning Objectives (knowledge, skills, attitude)**

**General learning objectives**

To enable the undergraduates to acquire important knowledge, learn skills and bring change in behaviour enabling them to:

1. Pick the important ENT ailments in OPD and emergency and treat them or refer if required.
2. Communicate adequately with the patients, their attendants and society with reference to the disease and its treatment.
3. Apply therapeutic morals and keep the confidentiality of the patient intact.
4. Understand the ENT public health problems and know how to prevent these.
5. Know the effect of systemic diseases on Ear, Nose and Throat.

***Specific Learning Objectives***

Towards the end of ENT module, the student of fourth year MBBS should be capable to

1. Take adequate history of ear nose & throat diseases.
2. Examine the ear nose & throat adequately

**Teaching Methodologies and Learning formats**

Multiple teaching and learning formats will be used in this module including

* Interactive lectures
* Tutorials /problem-based learning
* Bedside learning
* Ward rounds🡪 presentation of cases and observations
* OPD🡪Practical training for basic skills
* Case-based learning in the clinical meetings and discussions
* Community-based learning
* Operation Theatres
* Skills of sterilization to be learned and practiced
* Observations of major procedures,
* Emergency duties

**Contents of the module (Syllabus)**

**COURSE CONTENTS**

**NOSE:**

* Anatomy and physiology
* History taking and examination
* Diseases of external nose
* Congenital lesions, choanal atresia, meningocoele, encephalocele, trauma, cut nose, fractures, external deformities.
* Diseases of septum
* Epistaxis, DNS, Haematoma, Septal Abscess, Perforation
* Rhinitis Allergic, Atrophic, Hyper-trophic
* Foreign bodies
* V.M.R.
* Polyps; Mucous Ethmoidal, Antrochoanal
* Bleeding polyps
* Foreign body nose
* Rhinolith
* Maggots
* Sinusitis- Acute sinusitis, Chronic sinusitis, complications, Fungal infection of nose and paranasal sinuses
* CSF rhinorrhea
* Tumors- Basal cell carcinoma, Squamous cell carcinoma, Pappiloma, Osteoma
* Headache and its ENT causes

**ORAL CAVITY & PHARYNX**

* Anatomy and physiology
* History and examination

**ORAL CAVITY & PHARYNX:** Traumatic, Aphthus, Vincents angina, Agranulocytic, Tuberculous, Malignant ulcers, Thrush, Leukoplakia Behcet’s disease and Ulcerative lesions of oral cavity

Acute tonsillitis chronic tonsillitis Peritonsillitis and abscess, Diphtheria, Differential diagnosis of white patch on the tonsil

* Tonsil / oral cavity
* Tumours of tonsil
* Retro-pharyngeal abscess
* Pharyngeal abscess acute/chronic
* Parapharyngeal abscess
* Sleep apnea syndrome
* AIDS
* Ludwig’s angina
* Mumps
* Parotitis
* Hypertrophic adenoids
* Nasopharyngeal angiofibroma
* Lymphoma
* Squqamous cell carcinoma
* Cleft palate
* Plummer Vinson Syndrome
* Post cricoid tumour
* Pharyngeal pouch

**LARYNX**

* Anatomy
* Physiology
* History Examination
* Glottic-subglottic stenosis
* Laryngocoele
* Laryngomalacia
* Laryngeal web
* Trauma
* Foreign Body & Infections of Larynx Supraglottis
* Acute laryngitis
* Diphtheria
* Chronic specific laryngitis
* Tuberculosis
* Syphilis
* Leprosy
* Non-specific chronic laryngitis
* Vocal nodules
* Vocal cord paralysis
* Functional Aphonia
* Tumours
* Papilloma larynx
* Polyps
* Carcinoma larynx TNM classification
* Tracheostomy; Indications, Contra indications, Complications, Operation steps and Post op care

**EAR**

* Anatomy and physiology
* History and examination
* Tuning fork tests. Pure tone audiometery / impedance audio metery
* Pain in the ear
* **External ear:**
* Perichondritis
* Trauma to pinna / Haematoma
* Pre auricular sinus
* Wax ear
* Foreign body ear
* Hyper ostosis
* Neoplasia
* Boil ear
* Fungus
* Acute diffuse otitis externa
* Malignant otitis externa
* Myringitis bullosa
* Traumatic rupture
* **Middle ear / Inner ear**
* Eustachian tube dysfunction
* Otitis media with effusion
* Acute otitis media
* Traumatic perforation of tympanic membrane.
* Chronic otitis media i. Tubo tympanic ii. Mucosal disease iii. Attico antral
* Tuberculous otitis media
* Acute necrotizing otitis media
* Complications of otitis media
* Ototoxcity, Acoustic trauma
* Otosclerosis
* Vertigo, tinnitus
* Meniere’s disease
* Facial nerve paralysis
* Sensory neural hearing loss
* Acoustic neuroma
* Deafness; assessment & management(medical, surgical, hearing aids and cochlear implant)

**HEAD & NECK**

* Thyroglossal cyst / sinus
* Pre auricular cyst / sinus
* D/D of mass neck
* Diseases of salivary glands

**INSTRUMENTS**

* Myringotomy instruments
* Mastoidectomy instruments
* Myringoplasty instruments
* Walsham’s forceps
* Ashe’s forceps
* Trocar and Cannula
* Nasal Specula
* Freer Elevator
* Suction Tube ( Yankeur’s and nasal )
* Luc’s Forceps
* Tilley Nasal Dressing Forceps
* Tilley heckle forceps
* Eustachian Catheter
* Endotracheal tube, cuffed, non-cuffed
* Tracheostomy tubes
* Tracheal dilator
* Endoscopes
* Laryngoscopes
* Bronchoscopes
* Oesophagoscopes
* Nasopharyngoscope (Rigid/flexible)
* Endoscopic forceps and suction catheters
* Telescopes
* Adenoid curette
* Boyle Davis mouth gag
* Tonsil holding forceps
* Tonsillar artery forceps
* Tonsil snare
* Knot pusher

**PRACTICAL SKILLS:**

By the end of the clerkship in the department of ENT, the student should be able to:

1. Obtain an appropriate history.
2. Preform a complete regional examination
3. Identify common E.N.T. Head & Neck problems for a given patient and outline appropriate management plans.
4. Identify problems needing referral to an Otolaryngologist.

**General Skills**

The students should be able to:

1. Demonstrate the use of the head light for adequate illumination of the nasal cavities
2. Examine the oropharynx and the neck
3. Examine larynx by indirect laryngoscopy
4. Examination of postnasal space by posterior rhinoscopy.

**SPECIAL SKILLS**

1. Use the tongue blade to aid inspection of the oral / cavity.
2. Use the finger palpation examination of the oral cavity and tongue
3. Palpate the neck to assess the lymph-nodes and salivary glands in the neck.
4. Examination of cranial nerves.
5. Identify structures ( of the neck, sinuses and car) on X-ray (MRI, CT Scan)
6. Demonstrate the appropriate use of nasal speculum
7. Demonstrate the use of Otoscope to aid in examination of the external auditory canal and the tympanic membrane.
8. Demonstrate the use of tuning fork and interpret the findings.
9. Interpret pure tone audiometry.

**SKILLS LAB**

* Airway management, E.T.T intubation, Cricothyrotomy and Tracheostomy.

**Observing the Following Operations**

* Abscess incision drainage / Haematoma
* Reduction of fracture nose
* Septal correction surgery
* Antral wash out
* Cald Wel Luc’s operation
* Nasal packing ( anterior and posterior )
* Functional endoscopic sinus surgery
* Tracheostomy
* Tonsillectomy
* Adenoidectomy
* Management of obstructed airway
* Foreign body in trachea bronchial tree and larynx
* Surgeries for nasal polyps
* Mastoidectomy

**Timetable of the module (Alignment of activities with study hours)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Topic** | **Activity** | **Year** | **Time**  **(Hours)** |
| Introduction of faculty and ENT department | Discussion and visit of the ward | 3rd year | 10 |
| Anatomy and physiology of the ear | Interactive lecture, tutorial with models | 3rd year | 10 |
| Symptomatology of ear diseases  General examination of ear | Interactive lectures  Tutorials OPD discussion | 3rd year | 10 |
| Anatomy and physiology of the nose and paranasal sinuses | Lecture interactive sessions | 3rd year | 10 |
| Symptomatology of sinonasal region | Lecture  Case discussion in the ward and OPD | 3rd year | 10 |
| Anatomy and physiology of oral cavity and oropharynx | Lecture | 3rd year | 5 |
| Symptomatology of diseases of oral cavity and oropharynx | Lecture  Case discussion  OPD and theatre | 3rd year | 10 |
| Anatomy and physiology of larynx | Lecture | 3rd year | 6 |
| Diseases of larynx | Lecture  Case discussion  OPD and theatre | 3rd year | 10 |
| External ear diseases | Lectures  Case discussion  Bedside and operation theatre  Community-based learning | 4th year | 4 |
| Middle ear diseases | Lecture  OPD and ward discussion  theatre | 4th year | 8 |
| Inner ear diseases | Lecture  OPD and ward discussion | 4th year | 6 |
| S.N.H.L | Lecture  OPD and ward discussion | 4th year | 4 |
| Management of hearing loss | Lecture  OPD and ward discussion | 4th year | 3 |
| Larynx laryngeal diseases congenital | Discussion ward/ OPD | 4th year | 4 |
| Acquired laryngeal diseases | Lecture and discussion in the ward & OPD | 4th year | 4 |
| Laryngeal tumours | Lecture and discussion in the ward & OPD | 4th year | 5 |
| Oral cavity lesions | Discussion in the ward/ OPD Ocular lab | 4th year | 6 |
| Pharyngeal diseases | Discussion in the ward /OPD  Ocular lab | 4th year | 8 |
| Pharyngeal tumours | Lecture discussion in the ward & OPD | 4th year | 8 |
| Nose and paranasal sinuses congenital | Discussion in the ward & OPD | 4th year | 3 |
| Acquired sinonasal diseases | Discussion in the ward & OPD | 4th year | 8 |
| Sinonasal tumours | Lecture and discussion in the ward & OPD | 4th year | 4 |
| Miscellaneous | Problem Based Learning  Lecture  Discussion in the ward & OPD | 4th year | 10 |
| ENT Emergencies | Emergency department  PBL tutorial  Discussion on patients | 4th year | 10 |
| ENT operations complications and management | Lecture  OPD and ward discussion  Theatre | 4th year | 4 |
| Total | | | 180 |

**Attendance Requirement**

Minimum of 75% attendance will be required for students to qualify to appear in final university examinations and the final exam of the module. They must attend all scheduled teaching sessions and examinations. Absence due to illness must be certified appropriately by the General Physician. Attendance will be recorded through biometrics system. If their attendance is short they will be warned at midterm level.

**The Assessment**

Multiple assessment tools will be used during formative and summative assessment as show in the following table.

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Assessment** | **Knowledge** | **Clinical skills** | **Attitudes** |
| **Formative (Internal)**  **(10% = 20marks)**  Class test  Ward test  Log Book | Multiple choice questions (MCQ)  Short Answer Questions (SEQ) | Case presentation | Case presentation |
| **Summative (External)**  **(90% =180 marks)**  End of 4th year examination by UHS as 3rd professional MBBS | 45MCQs: each having 1mark  9 SEQs: each having 5marks  (90 marks) | OSPE (14 stations) including interactive  Case Presentation  (90 marks) | Case presentation during OSPE |

* Theory or knowledge assessment by MCQ and SEQ papers by UHS = 90 marks
* Skills and attitude assessment by OSPE by UHS = 90 marks
* Internal assessment by formative assessment by LMDC = 20 marks
* Total = 200 marks

*10 marks of internal assessment will be added each to theory and practical to make the final result by UHS. Minimum of 50% marks are required to pass each theory and practical separately.*

**LEARING RESOURCES**

1. Text book of ENT by Logan Turner. Latest edition.
2. Diseases of ENT by Dhingra. Latest edition.
3. Text book of ENT By Masud.
4. Oxford Hand book of ENT by Prescott.
5. Online journals and Reading materials through HEC Digital library Facilities.
6. Video tapes of clinical skills and surgical procedure are available in IT library.
7. Skills lab will provide the simulated learning experience of basic skills and procedures
8. Computer and Internet resources to gather the latest information.
9. The students are provided with many educational facilities like study room equipped with multimedia facilities and internet connection throughout the college campus

**RESEARCH PROJECTS**

* GENDER DIFFERENCE IN PRESBYCUSIS IN PAKISTAN.
* PREVELANCE OF HOARSENESS AND ETIOLOGIES IN PATIENTS WITH VOICE DISORDERS.