

ENT

OBJECTIVES:

- 1) To enable the student to familiarize himself with the common problems related to the subject of ENT
- 2) To enable the student to be competent to evaluate the symptoms, analyze the findings, diagnose the malady and suggest and implement the treatment modalities to treat the common ENT conditions.
- 3) To make the student competent to perform emergency life saving procedures commonly seen in ENT practice
- 4) To make the student aware of the Program on prevention of deafness and have knowledge of methods for screening for early detection of hearing loss.
- 5) To make learning of the subject of ENT through evoking a curiosity and generate a habit of self-learning which may be utilized to make the learning habit a dynamic one.
- 6) To enhance the attitude, communicative skills, adapt to changing trends in education, learning methods and evolve new diagnostic and therapeutic techniques in the subject of ENT
- 7) To make the student understand the rational use of pharmaco-therapeutic agents used in treating ENT diseases and have the knowledge of the common side effects and interactions of commonly used drugs.

COURSE CONTENTS

1. KNOWLEDGE:

	Must know	Desirable to know
• History taking in relation to common complaints encountered in ENT	✓	
• Examination of Ear, nose, Oral cavity, oropharynx, larynx, neck	✓	
• Causes of pain in the ear	✓	
• Wax	✓	
• Otomycosis	✓	
• Otitis externa	✓	
• ASOM	✓	
• NSOM	✓	
• Causes of Ear discharge	✓	
• CSOM-Safe	✓	
• CSOM-Unsafe	✓	
• Complications of CSOM	✓	
• Causes of Hearing loss	✓	
• Diagnosis of Hearing loss	✓	

	Must know	Desirable to know
• Types of hearing loss	✓	
• Otosclerosis	✓	
• Sudden SNHL	✓	
• Noise Induced Hearing Loss	✓	
• Causes of Facial Nerve paralysis	✓	
• Bells Palsy	✓	
• Traumatic lesions of the Facial nerve		✓
• Causes of Vertigo	✓	
• Difference between Central & Peripheral Vertigo		✓
• Meniere's Disease	✓	
• Tinnitus	✓	
• Causes of Nasal Obstruction	✓	
• DNS	✓	
• Nasal Polyps	✓	
• Adenoids	✓	
• Causes of Nasal Discharge	✓	
• Allergic Rhinitis	✓	
• Vasomotor Rhinitis	✓	
• Acute & Chronic Rhinitis	✓	
• Epistaxis: Causes & Management	✓	
• Angiofibroma	✓	
• Acute & Chronic Sinusitis	✓	
• Carcinoma of Maxilla	✓	
• Carcinoma of Nasopharynx		✓
• Diseases of the Salivary glands		✓
• Ludwigs angina	✓	
• Causes of Dysphagia	✓	
• Acute & Chronic Tonsillitis	✓	
• Acute & chronic abscesses in relation to Pharynx	✓	
• Causes of Hoarseness	✓	
• Acute & Chronic Laryngitis	✓	
• Benign lesions of the vocal cord	✓	
• Malignancy of the Larynx & Hypopharynx	✓	
• Causes of Stridor	✓	
• Laryngeal paralysis	✓	

	Must know	Desirable to know
• Foreign bodies in the air & food passages	✓	
• Emergency management of the airway	✓	
• HIV manifestations in ENT	✓	
• Basic principles of surgeries of ENT	✓	
• Acoustic Neuroma		✓
• Tumors of the middle ear & Mastoid		✓
• Electrodiagnostic tests for Facial nerve		✓
• Tests for malingering		✓
• Trauma to the face & neck		✓
• Neoplasms of the sinuses (other than maxilla)		✓
• Diagnosis of Voice disorders		✓
• Perforation of Oesophagus		✓
• Corrosive burns of Oesophagus		✓
• Motility disorders of Oesophagus		✓

2. SKILLS:

	P. Indep	Under Gui	Assist	Observe
The student should be adept at the:				
• Skill of using a head mirror and know how to focus the light	✓			
• Skill of using the different instruments in the ENT OPD as diagnostic tools eg. Tongue depressor, nasal speculum, Ear probe, laryngeal mirror, posterior nasal mirror, Ear speculum, tuning fork etc	✓			
• Skill of holding and using the Otoscope to be able to visualize the ear drum and its mobility. The student should be able to distinguish a healthy and unhealthy eardrum, a safe and unsafe ear disease.	✓			
• Skill of doing the various tuning fork tests viz. Rinne's, Weber's and Absolute bone conduction tests.	✓			
• Skill to identify and palpate the anatomical landmarks in ENT	✓			
• Skill to Examine the ear, nose, throat & neck	✓			
• Skill to Clean the ear	✓			
• Skill of doing ear syringing	✓			
• Skill of performing routine OPD procedures used for diagnostic and therapeutic methods	✓			

	P. Indep	Under Gui	Assist	Observe
• Skill to distinguish the types of hearing loss by learning the analysis of the tuning fork test & Audiograms.	✓			
• Skill of Performance of maneuvers like Valsalva's etc	✓			
• Skill of Testing the functions of various cranial nerves	✓			
• Skill of Check for spontaneous nystagmus	✓			
• Skill for doing the Tests for nasal patency	✓			
• Skill to be able to perform maneuvers to maintain and establish the airway in case of emergency.	✓			
• Skill to Suction a tracheostomy	✓			
• Remove wax		✓		
• Perform indirect laryngoscopy and posterior rhinoscopy		✓		
• Remove foreign bodies from the ear & nose		✓		
• Perform Anterior nasal packing		✓		
• Tracheostomy			✓	
• Septoplasty				✓
• Tonsillectomy & Adenoidectomy				✓
• Myringoplasty				✓
• Myringotomy				✓
• Mastoidectomy				✓
• Oesophagoscopy				✓
• Pure tone audiometry				✓

3. GENERAL AREAS TO BE DEVELOPED

- Communication skills
- Analytical and interpretational skills
- Access of Information
- Management of sequelae, long term follow up issues
- Supportive care
- Self help group leadership
- Future technology and advances update.
- Spoken language in vernacular

These general areas may be addressed to, in an integrated manner as a part of institutional development thrust areas.

ASSESSMENT METHODS AND TOOLS

Knowledge:

- Theory papers
- Essay type questions
- MCQs
- SPMP
- Viva-Voce
- OSCE

Attitudes:

- OSCE

Skills:

- Methods of Examination
- Practical demonstration of techniques
- OSCE

TEACHING LEARNING METHODS

Facilitation of teaching learning methods

- Teaching modules may be developed with an aim of involving the students in the learning process
- It is suggested to follow a Symptom-Diagnosis-Management protocol algorithm with adequate space for incorporating the advances in the field.
- For teaching purposes, algorithms may be developed. These could be different for different levels ie primary, secondary and tertiary care.
- Once this aspect has been addressed, a diagnosis can be reached and this knowledge can be applied in routine clinical practice.
- The formative evaluation should be done by using structured and objective methods while the summative evaluation should be done by a competency based evaluation which should evaluate the subject knowledge, professional competence, skill demonstration, communicational skills and his attitude to new learning skills using the conventional method of evaluation as well as Objective Structured Clinical Examination.
- Development of video films to demonstrate the art of history elicitation and examination methods. This will include the history taking as a proffered history and elucidated history.
- The student should be able to take a history in the correct method as demonstrated. This can be facilitated by simulated history taking practiced on colleagues.
- The examination methods could be demonstrated to the large batches by video films. The use of videoendoscopy, otoendoscopy and stroboscopy along with the CCTV projection can be encouraged to facilitate teaching large batches which are posted in the departments like ENT since the need to have proper light and limited visual access to the findings presents a problem. The teaching models may be procured and used to demonstrate the findings.
- A skill lab may be developed in the institution. Laryngoscopy, intubations, method of approaching and removing the common foreign bodies in the ear and the nose, skill of performing tracheostomy, anterior and posterior nasal packing, Myringotomy etc.

may be practiced on mannequins,

- The causes of these symptoms should be discussed with the student. A group of students may then be asked to discuss about the various diseases that can lead to the given problem, their specific etiologies, symptoms, signs and treatment.

Hence the classes can be a combination of didactic lectures taken by the teachers on the approach to a problem. The discussion on the various diseases can either be in the form of a lecture by the faculty or in the form of symposia presentation by the students, which will be moderated by the teachers. The end result should be the ability on the part of the student to identify the organ involved, the probable aetiology and an idea of any impending complication and the knowledge of how to manage the problem.

The stress of the T-L methods should be on developing a **symptom based approach**, in order to inculcate the habit of relevant history taking, thorough and proper examination as well as stimulation of analytical skills in the student, so that he is able to think of the causes of a particular problem in the patient and follow the correct approach towards the diagnosis, treatment and referral. In order to promote this approach, a modification of the Problem Based approach may be followed. The suggested structure in ENT is as follows:

The curriculum of ENT may be divided into 4 major parts dealing with the 4 subdivisions of the subject, ie

1. Ear
2. Nose
3. Larynx
4. Head & Neck

Each part could be further subdivided into the various common problems associated with that part. The causes for the same may then be classified

1. Ear:
 - a. Ear Discharge
 - b. Pain in Ear
 - c. Hearing loss
 - d. Facial Paralysis
 - e. Vertigo
 - f. Tinnitus
2. Nose:
 - a. Nasal Obstruction
 - b. Nasal discharge
 - c. Epistaxis
 - d. Mass in the nose
 - e. Headache
3. Throat:
 - a. Sore throat
 - b. Hoarseness
 - c. Dysphagia
 - d. Stridor / Dyspnoea
4. Head & Neck:
 - a. Neck swellings & sinus
 - b. Foreign bodies in the aerodigestive tract

- c. Neck trauma
- d. Emergency airway & its management

Each symptom could then be dealt with based on the causes that can be classified, for example

- a. Ear Discharge:
 - i. Recent origin
 - ii. Longstanding
 - iii. Purulent
 - iv. Watery
 - v. Bloodstained

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OTHER SUGGESTED T/L METHODOLOGIES ARE:

Structured interactive session,
 Small group discussion,
 Self learning tools,
 Assignments,
 PBL exercise,
 Video clips including clips on history taking & examination,
 Written case scenarios & SPMPs

SAMPLE 'MODULE ON HEARING LOSS':

Day 1: teacher gives a lecture on anatomical & Physiological aspects of the hearing mechanism

Day 2: The teacher gives a lecture on the approach to the Causes of the Hearing loss, by classifying them as Causes relating to Childhood H. Loss and Adult onset Hearing loss, with stress on the various problems, speech, social, psychological and financial, related to hearing loss.

Day 3-5: Students are asked to present short lectures on various causes of deafness:

Day 3: 5 speakers (15 minutes each + 30 minutes for discussion)

- i. Congenital Syndromic deafness (to include the common syndromes, their genotype and phenotype)
- ii. Congenital Non-syndromic deafness (to include congenital deafness due to various prenatal, natal and postnatal factors)
- iii. Methods of early diagnosis
- iv. Importance of Early diagnosis in treatment
- v. Treatment /Rehabilitation options

Day 4: 5 speakers (15 minutes each + 30 minutes for discussion)

- i. Diagnosis of H. loss in later life 1: Tuning fork tests

- ii. Diagnosis of H. loss in later life 2: Pure Tone Audiometry
- iii. Otitis media (briefly: as it will be covered in the modules on discharge & Pain)
- iv. Traumatic perforation of TM
- v. Otosclerosis

Day 5: 5 speakers (15 minutes each + 30 minutes for discussion)

- i. Acoustic Neuroma
- ii. Noise Induced Hearing loss
- iii. Presbycusis
- iv. Ototoxicity
- v. Sudden Sensorineural Hearing loss

Day 6: Lecture by the teacher on: **Approach to a patient with Hearing loss:** here the teacher must outline for the student the clinical clues that can help us to make a diagnosis in a patient complaining of hearing loss. He should then reaffirm about the various clinical tests that can help in this.

Day 7: The teacher gives a concluding lecture on the **preventable causes of hearing loss with stress on the various modalities for prevention and the National Programme for Prevention of Deafness, the recent advances in the field and future prospects.**

INTEGRATED TEACHING

Topics like Tuberculosis, Systemic disorders as related to multi organ involvement, occupational and environment issues, Noise pollution, pre operative assessment may be dealt with by integrated teaching methods like Symposia, Panel discussions. Headache, cough, dysphagia, allergic disorders, and haemoptysis may also be covered by integrated teaching methods.

The student should compulsorily undergo a basic life support course where the skills of endotracheal intubations and tracheotomy are reinforced. This may be assisted by the use of dummies and mannequins.

LEARNING RESOURCE MATERIALS

Text books: These are only for suggested reading. Other textbooks may be recommended taking local requirements into consideration.

- **Diseases of the Ear, Nose and Throat.** PL Dhingra. Published by Elsevier publications
- **Diseases of the Ear, Nose and Throat.** BK Roychowdhry. Published by Bijoya Publications
- **ENT Simplified.** Bachi Hathiram and DS Grewal. Published by Balani Publishers.
- **A Textbook of ENT Diseases.** KB Bhargava, SK Bhargava, TN Shah. Published by Usha publications
- **Logan Turner's Textbook of Otorhinolaryngology**
- **Textbook of Ear, Nose, throat and Head and neck diseases.** P. Hazarika, DR Nayak, R Balakrishna. CBS Publishers

OTHER RESOURCE MATERIALS

CDs	}	These may be developed as a
Videos	}	part of the institutional
Skills Laboratory	}	bank or from pooled sources
Internet		