

# **Skin and Special Senses Module**

## **Phase II**



**Faculty of Medical Sciences**  
**University of Sri Jayawardenepura**



## **Contributors Development stage**

<b>Committee</b> Chairperson	Dr. Satheeka Kamaladasa-Medicine
Convener	Dr..D.W. Ariyaratna and Dr. Sanjaya Hulathduuwa- Forensic Medicine
Members	Dr. Shrimathi Jayarathna-Pharmacology  Dr. Mangala Bopagoda- Pathology  Dr. Shamini Prathapan-Community Medicine  Dr. Shalindra Ranasinghe- Parasitology  Dr. Bawantha Gamage-Surgery
Demonstrators	Dr. C.B. Ranaweera

## **Contributors Implementation stage:**

Committee Chairperson	Dr. Neelika Malavige-Microbiology
Convener	Dr. Shalindra Ranasinghe- Parasitology
Members	Dr. Satheeka D. Kamaladasa-Medicine  Dr. Bawantha Gamage-Surgery  Dr. Shrimathi Jayarathna-Pharmacology  Dr. Mangala Bopagoda- Pathology  Dr. Shamini Prathapan-Community Medicine
Extended Faculty	Prof. Jayamini Seneviratne- LRH

## INTRODUCTION

The special senses module will include basics of dermatology, otorhinolaryngology and ophthalmology that occupies a substantial proportion of primary health care.

Our aim of this module is to familiarize the medical students to common skin, ENT & eye problems that they will encounter in their day to day practice.

We have concentrated on common skin, ENT & eye problems that you will see in a developing country like ours, which make up the bulk of this module. We also have mentioned some other rare conditions, which are important to detect & refer for specialised care, when possible. The core content areas in the module which are essential to know are highlighted as (A) and areas good to know as (B) and content areas nice to know as (C).

This module guides the medical student through the practical aspects of diagnosis, treatment & management of common skin, ENT & eye diseases. The duration of the special senses module will be 2 weeks, which will be during the phase II of your medical curriculum. Teaching of this module will be in the form of lectures, Computer Assisted Learning, Problem Based Learning, practicals & tutorials.

We hope you will enjoy the special senses module & do not hesitate to contact any one of our committee members if you have any queries regarding the module.

## **General Objectives: Skin**

### ***At the end of the module the student should***

- Be able to describe the basic structure and functions of the skin and immunological basis of the skin diseases.
- Know the prevalence of dermatological diseases in the community & the patterns of skin disorders in Sri Lanka.
- Identify the common and important dermatological conditions and be able to investigate, manage and refer when appropriate.
- Recognize, advise & refer the less common skin disorders & management problems
- Describe the basis of dermatological therapy including the proper use of topical steroids
- Discuss the principles of prevention of infective & malignant skin disorders
- Describe the skin manifestations of systemic disorders.

## **General Objectives: Eye**

### ***At the end of the module, the student should***

- Describe the basic anatomy and physiology of the orbit, eye and visual pathway
- Discuss the errors of refraction, accommodation, errors of muscle imbalance, squint, presbiopia, hypermetropia, myopia, astigmatism and amblyopia
- Describe abnormalities of eye lid and lacrimal system
- Diagnose and manage common diseases of eye and orbit presenting to primary care and refer less common conditions for specialized care
- Be able to identify the sinister causes of eye disorders from benign causes.
- Describe disorders associated with common systemic diseases

## **General Objectives: ENT**

***At the end of the module, the student should***

- Describe the basic anatomy and physiology of Ear, Nose and Throat.
- Describe basic aetiopathogenesis of common ENT diseases
- Diagnose and treat common diseases of ENT in a hospital setting and in general practice
  - External, middle and inner ear.
  - Nose and Para nasal sinuses.
  - Pharynx and Larynx.
- Identify conditions that need urgent referral/admission to the hospital and conditions that can be dealt within primary care.
- Identify the less common conditions needing referral for opinion & further management.

## **Broad Content areas: Skin**

- Common skin disorders : Eczema/dermatitis, atopic dermatitis, contact dermatitis and photo dermatitis
- Erythematous and Papulosquamous Disorders
  - Psoriasis, Lichen planus, Pityriasis rocea,
  - Exfoliative dermatitis
- Common skin infections –
  - Bacterial infections
  - (acute and chronic infections) -Leprosy
  - Fungal infections- (superficial and deep)
  - Viral infections
- Parasitic infections and infestations
- Hypersensitivity and miscellaneous inflammatory skin disorders - Urticaria, Angio-oedema, Diseases of the sebaceous and sweat glands
- Disorders of hair and nails, bullous disorders, pigmentary disorders
- Benign and malignant lesions of the skin
- Skin in systemic diseases
- Drugs in skin disorders
- Leg ulcers and management

## **Broad Content areas: Eye**

- Basic anatomy, physiology of the orbit, eye and visual pathways
- Common eye infections and inflammations of orbit, conjunctiva, cornea, sclera, lacrimal sac, uvea, retina
- Common congenital anomalies of eye, adenexae and orbit
- Common types of cataract & glaucoma
- Refractive errors and basic principles of classification, clinical features and management
- Types of ocular trauma - clinical features, complications and management
- Optic nerve disorders & orbital disorders
- Ocular manifestations of systemic diseases : Diabetes, hypertension
- Types of blindness and their causes in Sri Lanka
- Ocular side effects of systemic drugs.
- Introduction of national programme of prevention and control of blindness
- Common retinal disorders and their aetiology, clinical features and management
- Vitreous diseases: aetiology, clinical features and principles of management
- Strabismus - aetiology, symptoms, diagnosis and principles of management

## **Broad Content areas: ENT**

- Diseases of the external ear.
  - Congenital anomalies
  - Infections
  - Foreign Body, Wax, Trauma
  
- Diseases of the middle ear-
  - Trauma to the middle ear
  - Acute & chronic otitis media
- Deafness and management
- Vertigo and management
- Disorders of nose & paranasal sinuses
  - Congenital malformations
  - Trauma
  - Infections/Inflammatory conditions
- Disorders of pharynx and pharyngeal spaces
  - Congenital anomalies
  - Trauma
  - Foreign bodies
  - Inflammatory and infective conditions
  - Vocal cord paralysis
  - Stridor and management
  
- Tumours of external ear, middle ear and nose, paranasal sinuses, pharynx and larynx

<b>Main content area (Intermediate Objectives)</b>	<b>Content in detail [Broad Content Area]</b>	<b>Learning Activities</b>	<b>Duration</b>	<b>Department</b>
<b>Common skin disorders</b>  Describe the clinical features, discuss the differential diagnosis, outline the investigations and management of Eczema /Dermatitis-  (Exogenous, Endogenous)	<ul style="list-style-type: none"> <li>• Atopic eczema,</li> <li>• Discoid eczema,</li> <li>• Contact dermatitis,</li> <li>• Photo dermatitis,</li> <li>• Seborrhoeic dermatitis (A)</li> </ul>	Lecture	45 minutes	Medicine
<b>Erythematous &amp; papulo squamous eruptions diseases</b>  Describe the clinical features, discuss the differential diagnosis and outline the management	<ul style="list-style-type: none"> <li>• Psoriasis,</li> <li>• Lichen planus</li> <li>• Pityriasis rocea</li> <li>• Exfoliative dermatitis (A)</li> </ul>	Lecture	45 minutes	Medicine
<b>Acute bacterial skin infections, skin infections mediated by</b>	Acute infections: (A)  <ul style="list-style-type: none"> <li>• Impetigo, Ecthyma,</li> </ul>	2 Lectures	45minutes	1 Medicine



<p><b>bacterial toxin and Leprosy.</b></p> <p>Describe the clinical features, discuss the differential diagnosis and outline the investigations, management and prevention of common skin and soft tissue infections</p>	<ul style="list-style-type: none"> <li>• Furunculosis, Folliculitis, Carbuncle,erysipelas, Cellulitis</li> </ul> <p>Skin infections mediated by bacterial toxins (B)-</p> <ul style="list-style-type: none"> <li>• Staphylococcus scalded skin syndrome</li> <li>• Toxic shock syndrome</li> <li>• Necrotizing fasciitis</li> <li>• Gas gangrene</li> </ul> <p>Leprosy: clinical spectrum, investigations, management, control and rehabilitation (A) , Tuberculosis of the skin (B)</p>			<p>1 Microbiology</p>
<p><b>Fungal infections of the skin</b></p> <p>Aetiopathogenesis, clinical features, diagnosis, collection of specimens, timing &amp; transfer to the laboratory microbiological diagnosis &amp; interpretation of reports</p>	<p>Superficial fungal infections (A)</p> <ul style="list-style-type: none"> <li>• Pityriasis Versicolor ,</li> <li>• Dermatophytosis ,</li> <li>• Candidiasis</li> </ul> <p>Nail fungal infections (A)</p> <ul style="list-style-type: none"> <li>• Paronychia,</li> <li>• Onychomycosis</li> </ul> <p>Subcutaneous and Deep Fungal infections (C)</p> <ul style="list-style-type: none"> <li>• Mycetoma</li> <li>• Chromoblastomycosis</li> <li>• Sporotrichosis</li> </ul>	<p>1 Lectures</p> <p>1 Practical</p>	<p>45 minutes</p> <p>45 minutes</p>	<p>Microbiology</p> <p>Microbiology</p>

<p><b>Viral skin infections</b></p> <p>Describe clinical presentations, causative organisms, lab diagnosis &amp; outline the principles of management &amp; prevention of important viral infections</p>	<p>Vesiculo and papular eruptions (A)-</p> <ul style="list-style-type: none"> <li>• Herpes Simplex,</li> <li>• Chicken pox, Herpes Zoster</li> <li>• Molluscum contagiosum</li> <li>• Viral warts-Human papilloma virus</li> <li>• Measles</li> <li>• Rubella</li> <li>• Herpes virus 6 and 8</li> <li>• Hand foot and mouth disease</li> <li>• IMN</li> </ul> <p>Viral infections that may be associated with skin rashes- dengue, chikungunya (B)</p>	<p>1 SGD</p> <p>1FiLM</p>	<p>45 minutes</p> <p>45 minutes</p>	<p>Microbiology</p> <p>Medicine</p>
<p><b>Paediatric skin disorders</b></p>	<p>Maculo-papulo skin rashes childhood exanthemas (A)</p> <p>Measles, Rubella, IMN</p>	<p>1 Lecture</p>	<p>45 minutes</p>	<p>Paediatrics</p>
<p><b>Parasitic skin infestations</b></p> <p>1. List and identify the parasites</p>	<ul style="list-style-type: none"> <li>• Scabies (A)</li> <li>• Cutaneous Leishmaniasis (A)</li> <li>• Cutaneous larva migrans (B)</li> </ul>	<p>1 Lecture</p>	<p>45 minutes each</p>	<p>Parasitology</p>

<p>responsible for the parasitic skin diseases.</p> <p>2. Describe the parasitic life cycle and name and identify the vectors</p> <p>3. Outline the geographic distribution</p> <p>4. Describe the pathogenesis, clinical features, diagnosis, treatment and control in relation to parasitological basis</p>	<ul style="list-style-type: none"> <li>• Dirofilariasis (C)</li> <li>• Pediculosis (A)</li> </ul>	<p>1 Practical</p> <p>1 FiLM</p> <p>1 Handout</p>		
<p><b>Hypersensitivity and miscellaneous inflammatory skin disorders and drug eruptions</b></p> <p>Identify the clinical features, discuss the differential diagnosis &amp; outline the principles of management</p>	<ul style="list-style-type: none"> <li>• Drug eruptions (A) Urticaria – Acute &amp; Chronic, Angiooedema Erythema nodosum, Erythema multiforme, Papular urticaria, Miliaria “sweat rash”</li> <li>• Acne vulgaris (A)</li> <li>• Rosacea (C)</li> </ul>	<p>Lecture</p>	<p>45 minutes</p>	<p>Medicine</p>

<p><b>Hair and nail disorders, bullous disorders, inherited disorders</b></p> <p>Recognize and manage when possible and refer the less common skin diseases</p>	<p>Disorders of Hair and Nail (A)</p> <ul style="list-style-type: none"> <li>• Nail – Paronychia, Candidiasis</li> <li>• Disorders of hair-</li> <li>• Diffuse and localized alopecia, Bullous disorders (B)</li> </ul> <p>Pigmentary disorders (B)</p> <ul style="list-style-type: none"> <li>• Leucoderma</li> <li>• Hyperpigmentation</li> </ul> <p>Inherited disorders- Icthyosis (C)</p>	Lecture	45 minutes	Medicine
<p><b>Skin manifestations of systemic disorders</b></p> <p>Recognize skin manifestations of systemic disorders</p>	<ul style="list-style-type: none"> <li>• Diabetes Mellitus. (A)</li> <li>• Nutritional deficiencies (A)</li> <li>• Vasculitis, connective tissue disorders- SLE, systemic sclerosis, dermatomyocitis (B) , malignancy (A)</li> </ul>	Lecture	45 minutes	Medicine
<p><b>Benign, premalignant and malignant conditions of the skin</b></p> <p>Identify common tumours, pre</p>	<p>Papillomas, neurofibromatosis, premalignant- solar keratosis, malignant - basal cell carcinoma, squamous cell carcinoma, melanoma (B)</p>	Lecture	45 minutes	Pathology

malignant lesions, cysts in the skin and sub-cutaneous tissues				
<b>Drugs in skin disorders and use of topical corticosteroids</b>	<ul style="list-style-type: none"> <li>• Dermatological disorders, eczema, dermatitis &amp; psoriasis etc... bacterial infections, viral infections, fungal infections, acne (A)</li> <li>• Steroids- indications, contraindications and side effects (A)</li> </ul>	Lecture	45 minutes	Medicine
Wound and leg ulcers	<ul style="list-style-type: none"> <li>• Classify surgical wounds according to the degree of microbial contamination. eg. Clean/ clean contaminated/ contaminated and dirty &amp; understand their clinical significance, clinical diagnosis of different types of ulcers. eg.Venous/Arterial/ Infective/ Neuropathic/ Trophic (A)</li> <li>• Discuss the investigations and treatment modalities of the above ulcers with emphasis on rehabilitation.(including amputees) (A)</li> </ul>	Lecture	45 minutes	Surgery
<b>Diseases of external and middle ear.</b>	<p><b>Diseases of external ear</b></p> <ul style="list-style-type: none"> <li>• Foreign body, wax (A)</li> <li>• Infections , Perichondritis, Otitis externa (A)</li> <li>• Congenital anomalies (C)</li> </ul>	Lecture	45 minutes	Surgery (ENT)

	<ul style="list-style-type: none"> <li>• Trauma to pinna &amp; ear canal, perichondrial haematoma (C)</li> </ul> <p>(This will be covered in the Trauma Module)</p> <p><b>Diseases of middle ear</b></p> <ul style="list-style-type: none"> <li>• Trauma to middle ear &amp; tympanic membrane (A)</li> <li>• Infections- “earache &amp; discharge”, Acute otitis media, Non suppurative otitis media, Chronic otitis media (A)</li> <li>• Paediatric ENT conditions (A)</li> </ul>			
Deafness and Vertigo	<ul style="list-style-type: none"> <li>• Describe the causes of Deafness and its management</li> <li>• Deafness-</li> <li>• Conductive &amp; sensori-neural: causes and diagnosis (A)</li> <li>• Hearing impairment in a child (A).</li> <li>• Assessment – Audiometry (B)</li> <li>• Vertigo &amp; tinnitus: causes, investigations and management. (B)</li> </ul>	Lecture	45 minutes	Surgery (ENT)
<b>Nose and Para nasal sinuses</b>	<ul style="list-style-type: none"> <li>• Rhinitis “stuffy nose”, Sinusitis- “headache” (A)</li> <li>• Septal Abscesses (B)</li> </ul>	Lecture	45 minutes	Surgery (ENT)

<p>Outline the aetiology, diagnosis &amp; management of inflammatory and infective causes.</p>	<ul style="list-style-type: none"> <li>• To be able to outline the management of basic traumatic and other conditions of nose / Para nasal sinuses.</li> <li>• Epistaxis – traumatic &amp; non traumatic (A)</li> <li>• Fracture of nose / sinuses, septal haematoma, foreign bodies (B)</li> <li>• List the common congenital malformations of nose / Para nasal sinuses</li> <li>• Congenital malformations, septal deviation, external nasal deformities (C)</li> </ul>			
<p>Inflammatory and Infective diseases of the pharynx</p>	<p>Describe the following inflammatory and Infective diseases (A)</p> <ul style="list-style-type: none"> <li>• Acute pharyngitis: “sore throat”</li> <li>• Chronic pharyngitis. -TB</li> <li>• Tonsillitis: Acute and chronic, indications for tonsillectomy.</li> <li>• Adenoid hypertrophy and indications for adenoidectomy.</li> <li>• Abscesses: Peritonsillar, Retropharyngeal.</li> <li>• To be able to identify the common traumatic and other complications in the pharynx</li> <li>• Foreign body impaction (A)</li> <li>• Trauma (A)</li> </ul> <p>• Describe common tumours: Benign and Malignant (B)</p>	<p>Lecture</p>	<p>45 minutes</p>	<p>Surgery (ENT)</p>

Diseases of the Larynx	<ul style="list-style-type: none"> <li>• To be able to outline problems of foreign body impaction (A)</li> <li>• Describe the inflammatory and infective conditions of larynx and bronchi.</li> <li>• Acute – Laryngitis, Laryngo-tracheo bronchitis, Epiglottitis (A)</li> <li>• Chronic – Tuberculosis,</li> <li>• To be able to identify congenital abnormalities of larynx (B)</li> <li>• Define stridor and its management (A)</li> <li>• Describe endotracheal intubation and tracheostomy (A)</li> <li>• “Hoarseness’ and vocal cord palsies. Identify the causes: Inflammatory,traumatic, idiopathic, neurological (B)</li> <li>• Outline the tumours of larynx: Benign and Malignant tumours (B)</li> <li>• Aetiopathogenesis microbiological basis, management and complications of infective ENT condition (A)</li> </ul>	Lecture	45 minutes	Surgery (ENT)



Common eye disorders	<ul style="list-style-type: none"> <li>• Lid infections &amp; inflammations- “ eye discharge/stye”,Lacrimal sac infections and causes for Epiphora</li> <li>• Aetiology, clinical features, complications and treatment of corneal disorders: Corneal Infections, corneal ulcers, keratomalacia scleral and corneal inflammations (A)</li> <li>• Aetiopathgenisis and complications of lid abnormalities -Ectropion, Entropion, Ptosis, Lagophthalmos(A)  -Symblepharon, congenital lid abnormalities -  (epicanthus) (C)</li> </ul> <p>Principles of keratoplasty: corneal blindness &amp; eye donation (B)</p>	Lecture	45 minutes	Surgery (ENT)
Painful red eye	Discuss the differential diagnosis of “painful red eye”. (A)	Lecture	45 minutes	Surgery (ENT)

	<ul style="list-style-type: none"> <li>• Trauma</li> <li>• Anterior/posterior uveitis</li> <li>• Episcleritis</li> <li>• Scleritis</li> <li>• Corneal ulcers, keratitis</li> <li>• Foreign bodies</li> <li>• Acute angle closure glaucoma</li> <li>• Sub conjunctival haemorrhage } Painless</li> </ul> <p>Pterygium</p> <p>Conjunctivitis- Microbiological basis of diagnosis, management and complications</p>	FiLM	45 minutes	Microbiology
Visual impairment /Blindness- sudden & gradual	<ul style="list-style-type: none"> <li>• Cataract: Diabetic, Senile, Traumatic, Presenile cataract (A), Congenital (B)</li> <li>Types of glaucoma: Angle closure, open angle (A), Congenital &amp; Secondary (B)</li> <li>• Ocular trauma clinical features, complications and</li> </ul>	Lecture	45 minutes	Surgery (ENT)

	<p>management : Physical (blunt, penetrating), thermal, chemical, radiation (A) (This will be covered in the Trauma module), Sympathetic ophthalmitis (B)</p> <ul style="list-style-type: none"> <li>• Types of blindness and their causes Student should be aware of National programme of prevention and control of blindness (A)</li> <li>• Vitreous diseases : Haemorrhage and degeneration</li> </ul> <p>Common retinal disorders : CRVO, BRVO,CRA) including vascular occlusions, inflammation and detachment (B)</p>			
Diseases of the orbit	<ul style="list-style-type: none"> <li>• Orbital diseases- Aetiology, clinical features and management : Orbital cellulitis. infection and inflammatory (A), Neoplastic (B)</li> <li>• Refractive errors : Classification,clinical features and treatment: myopia, astigmatism, hypermetropia, presbiopia (A)</li> </ul>	Lecture	45 minutes	Surgery (ENT)

	<ul style="list-style-type: none"><li>• Strabismus: Congenital, nystagmus, paralytical (A)</li><li>• Aetiology clinical features and management of optic nerve disorders: Papilloedema (A), optic neuritis (B), optic atrophy (B)- Basic knowledge</li><li>• Ocular side effects of commonly used systemic drugs</li></ul>			
--	--	--	--	--

## Assessments

**Summative-** assessment at the end of the term as planned in curriculum

### TEACHING METHODS

1. Lectures	23
2. Fixed Learning Module (FLM)	3
3. Small group discussions	2
4. Practicals	2

## **SUGGESTED READING MATERIAL**

### **Dermatology** (one of the following books)

- Clinical Dermatology. Hunter, Savin & Dahl
- Dermatology Illustrated. Colour Text – David J. Gawkrödger
- Roxburghs Common Skin Diseases – Ronald Marks
- Clinical & Illustrated Text book of Dermatology. Rona M. Makie
- Practical Dermatology. Snedden & Church
- Essentials of Dermatology. J.L. Burton

### **Otorhinolaryngology** (one of the following books)

- Lecture notes on ENT Surgery. P.D. Bull
- Diseases of Nose, Throat & Ear & Head & Neck. Hall & Colman
- Short practice of Otolaryngology. K.K. Ramalingam

### **Ophthalmology**

- Lecture notes on ophthalmology (one of the following books)
- Synopsis of Ophthalmology. Trevor Roper
- Clinical ophthalmology. Prof. Philips
- Ophthalmology. John Parr