"This prospectus is made under the provisions of the Universities Act, the Postgraduate Institute of Medicine Ordinance, and the General By-Laws No. 1 of 2016 and By-Laws No. 2 of 2016 for Degree of Doctor of Medicine(MD) and Board Certification as a Specialist"

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

PROSPECTUS

SUBSPECIALTY TRAINING

AND

BOARD CERTIFICATION

IN ORBIT AND OCULOPLASTY

2011

BOARD OF STUDY IN OPHTHALMOLOGY

Contents

Prospectus Post MD (Ophthalmology) Subspecialty Training in "Orbit and Oculoplasty" Leading to Board Certification

1. Background and Justification

The eye lid is an important protective covering of the eye. Many disease conditions affecting the structure of the eye lids or their functions can threaten sight. A proper understanding of the anatomy and physiology of the eye lid cannot be acquired in isolation and should be made in the broader context of the structures which are closely related to it.

The diagnosis and management of orbital diseases need not only knowledge but skills and ingenuity. The incidence and prevalence of such diseases vary with age, sex and the race. Orbital diseases may arise primarily within the orbit or spread from adjacent structures or from distant sites via the circulation.

Orbital diseases threaten sight by affecting the cornea at the front part of the eye, or the optic nerve at the back. It is well established that early diagnosis and management of orbital diseases will restore visual functions. However, an accurate diagnosis of the condition may require the expertise of a broad spectrum of specialists such as a Pathologist, a Neurosurgeon, an Otorhinolaryngologist, a Plastic surgeon, a Neuroradiologist and a Neuroanaesthesiologist.

At present in view of the major developments in the knowledge and the availability of new technologies in the diagnosis and management of orbital diseases and oculoplasty, a dedicated and well trained surgeon would contribute immensely to a significant reduction in the morbidity seen in this area of Ophthalmology.

2. Eligibility Requirement

The candidate who enters the above subspecialty training program should have successfully completed the M.D. (Ophthalmology) examination conducted by the PGIM.

3. Admission process

Admission will be made by the Board of Study in Ophthalmology for the training slots allocated for the subspecialty based on the trainees' order of merit at the MD Part II examination.

4. Programme duration

The total duration shall be 3 years after the successful completion of the MD Examination

4.1 Two years will be in Sri Lanka

a) 1st year [12 months] of training will be in Sri Lanka, in General Ophthalmology in a unit approved by the Board of Study in Ophthalmology.
b) 2nd year of training [12 months] will be in a specialized unit [once established] in Sri Lanka.

4.2 One year will be in a center of repute overseas approved by the Board of Study

A short exposure to field of Facio Maxillary, Surgery, Neurosurgery, Autolaryngiology and Neuroimaging is required.

Facio-Maxillary	for one month
Autolaryngiology	for two weeks
Neuroimaging	for two weeks
Neuro surgery	to attend combined surgery sessions

5. Course Syllabus - Orbital Diseases & Oculo Plasty

Part 1 – Basic Anatomy & Physiology

Applied Anatomy of the Orbit
Size, shape, relations
Orbital walls
Apex of the orbit
Orbital fissures
Surgical space in the orbit
Orbital fat
Apertures

Anatomy of the Sinuses & Cranial Cavity
Anterior & middle cranial fossae
Base of the skull
Frontal, Maxillary, Ethmoid, Sphenoid Sinuses
Nasal cavity

Anatomy of Ocular Adnexia
Eye lids –Skin and subcutaneous tissues Orbicularis, m
Meibomian glands, glands of Zeiss,.
Orbital septum. Retractors. Tarsus Muller's muscle, Whitnall's ligament,
Lacrimal punctae, canaliculi, nasolacrimal ducts,

Lacrimal gland
Lacrimal drainage system
Periorbital tissue

Relations of Orbital Contents
Optic nerve
Vessels
Nerves
Muscles

Part 2 - Examination Techniques

Visual Acuity
External Examination (Inspection for Proptosis, enophthalmos, Globe displacement)
Lid movements, Levator functions,eye lid / eye brow malpositions,
Pupilary reaction
Ocular Motility
Assessment of Proptosis – Exophthalmometry
Assessment of Intraocular pressure
Fundoscopy
Slit lamp Biometry
Ultrasound Scan of the Orbit
Patency of Lacrimal drainage system (dye testing lacrimal probing and irrigation),
External Photography

Part 3 – Orbital Disorders
Diagnostic Approach

Inspection
Proptosis, Enopthalmos
Unilateral or Bilateral
Palpation – Consistency – Reducibility in Vascular lesions
Retro-ocular Resistance - In solid tumours
Orbital Rim
Localized masses
Enlarged lymph nodes
Ocular movements – FDT
Examine for effects of orbital disease
Functional effects – Reduce sensation
Mass effects – Displacement
Bone expansion
Cicatrization
Localization – Apical
Intraconal
Optic Nerve

Diffuse
Periorbital

Systemic Examination

Special Investigations

Haematological
Hormonal Assay
Plain X ray – Different views for demonstration of sinuses, floor of sellae, Orbital rim, Zygomatic Arch, Optic Foramen, Size of the Orbit
Ultrasonography
Neuroimaging (CT, MRI, MRA, DSA)
Histological Examination – FNA
Incisional Bioscy
Excisional Biopsy
Core Biopsy
Endoscopic
Immunohistochemistry
US Guided FNA

Part 4 - Orbital Disorders

Disorders occurring predominantly in children

Congenital Anomalies-Anophthalmos. Microphthalmos. Craniofacial Clefts. Cranio Synostosis and others (Crouzons, Apert syndromes), cryptophthalmos,
Histiocytic Disorders
Inflammation / Infection
Harmatoma / Neural Tumours
Rhabdomyosarcoma
Secondary orbital tumours
Metastatic tumours

Disorders occurring predominantly in adults

Inflammatory – Infections
Acute Orbital / Preseptal Cellulitis
Orbital Abscess
Cavernous Sinus Thrombosis

Sub Acute Inflammatory Conditions
Associated Systemic Diseases – Thyroid Ophthalmopathy
Underlined Immunopathological mechanisms

Painful Ophthalmoplegia – Nasopharyngeal tumours
Tolosa -Hunt Syndrome
Gradenigo's Syndrome
Giant Cell Arteritis
Paracella Syndrome
Vascular Malformations

Chronic Inflammatory – Orbital Pseudotumour

Neoplastic -
Optic nerve glioma, meningioma, neuroblastoma
Secondary orbital tumours metastatising from cancers of the breast , lung, prostate colon and melanoma
Vascular Tumours - haemangioma heamangipericytom
Lacrimal gland tumours

Traumatic
Le – Port I, II, III
Fracture of orbital walls
Orbital foreign bodies
Orbital haemorrhage
Contracted Sockets

Orbital Involvement in Diseases of Paranasal Sinuses

Diseases of Lacrimal System

Physiology of Lacrimal System
Symptoms of Lacrimal System – Test for Lacrimal secretion & excretion
Congenital Anomalies of the Lacrimal Drainage System
Acquired anomalies of the Lacrimal Drainage System

Lacrimal gland lesions

Inflammatory – Dacryoadinitis
Infiltrations
Neoplastic – Benign mixed tumour
Malignant adenoid cystic carcinoma, malignant mixed tumour lymphoma

Diseases affecting Eye Lids

Congenital anomalies, (coloboma, distichiasis, epicanthus, telecanthus, Blepharophimosis ankyloblepharon, epiblepaharone, Goldenhar syndrome,)
Entropian
Ectropian
Symblepharon
Trichiasis
Lid retraction
Traumatic lid injuries - involving lid margin, lacrimal trauma, With tissue loss
Lid Tumours - Benign
Malignant
Congenital abnormalities – Coloboma

Blepharophimosis
Ankyloblepharon. Euryblepharon. Eouicanthus
Facial Palsy

Part 5 - Surgical Procedures

Orbital Surgery

Introduction

Knowledge of the main compartments and their boundaries is needed in choosing the most direct approach

Orbital Biopsy – Frozen sections
Direct
US guided FNAB
Orbitotomy – Anterior[Superior approach transcutaneous transconjunctival], Medial, Lateral and Inferior for removal of mass lesions

Orbital Decompression – Endoscopic
Direct

Repair of orbital fractures - Le port fracture treatment including dental stabilization. Open reduction with rigid fixation with microplating system

Combined surgical procedures with faciomaxillary team in fractures involving zygomatic complex

Combined surgical procedures with Neurosurgical team in mass lesions involving orbital apex region with intracranial extensions

Optic nerve sheet decompression
Orbital implants
Enucleation
Evisceration
Anophthalmic socket
Exenteration
Socket reconstruction

Post operative care-Measures to be taken to reduce oedema, infection and haemorrhage

Complications of orbital surgery-Good preoperative evaluation. Choice of appropriate approach. Adequate exposure. Good haemostasis. To avoid complication

Oculoplasty

Principles of eye lid surgery

Patient preperation-Proper selection.
Adequate preoperative evaluation.
Lid position.
Lid movements [Levator function. Bell's phenomenon. Jaw –winking. Laxity of lower lid retractors]
Brow position.
Upper lid skin crease.
Medial and lateral canthus
Meticulous surgical technique.

Incisions –
Wound closure –different suture techniques
Skin grafts-Full thickness grafts. Split skin grafts. Skin graft fixation
Grafts for reconstruction of posterior eye lid lamellar
To recognize indications and to perform basic biopsy techniques lateral tarsorrhaphy

Entropian-Involutional
Sutures
Wies
Quickert
Jones
Lateral canthoplasty
Blepharoplasty
Simple eye lid reconstruction

Botulinm toxin injection

Entropian Cicatricial
Tarsal fracture
Anterior lamellar repositioning
Tarsal Wedge resection
Mucous membrane graft

Ectropian-Involutional
Horizontal lid shortening
Stabilization of medial canthal tendon
Medial wedge resection
CicatricialEctrpian
Z- plasty
Skin graft
Paralytic –Medial canthoplasty
Lateral canthal sling

Management of burns of eye lids

Ptosis
Fasanella –Servat
Levater aponeurosis repair
Levater resection-Anterior/posterior
Brow suspension

Blepharoplasty
Eye lid Reconstruction
Anterior Lamellar-Rotational flap
Transposed flap
Posterior Lamella-Use of grafts

Medial canthal repair

Eye lash abnormalities –Trichiasis/Districhiasis

Training Settings/units and educational resources
It is patient based practical training.To gain experience in Patient evaluation, preoperative assessment and post operative follow up will be done at the routine clinics. Surgical skills training will be monitored at the operating theatre sessions, Process of learning will be from basic level goals to standard level and from there on to the advanced level. It will also include lectures and tutorials conducted by the trainer.

6- Course Evaluation

Programme evaluation to assess educational process, resources available and learning environment. Key factors for programme evaluation would be description of the programme and the performance of the trainee.

6.1 Portfolio – Surgical Log Entry, Case Records, Reflective writing,

Preferably 1 Publication and 1 Presentation ((Annexure 1)

6.2 Dissertation and Viva (Annexure 2)

6.3 Feedback from trainers and Trainees (progress reports)

Systematic and regular feedback (at least once in six months) should be obtained from the Trainees and trainers.
Trainees also should be given the opportunity to write a report on their own on the programme

7. Assessment Procedure

7.1 Portfolio - Case Records 05 patients (Annex 1), Reflective writing, Preferably 1 Publication and 1 Presentation

7.2 Dissertation (Annex 2) based on the Research project

7.3 Pre Board Certification Assessment (PBCA)

7.3.1 SEQ Paper – 2 hours – 4 Questions
7.3.2 Clinical Examination (3 short cases) – two examiners
7.3.3 Viva Portfolio and Dissertation
7.3.4 Presentation to the BOS indicating the training received and future vision

Marking Scheme

7.3.1, 7.3.2 and 7.3.3 shall be marked with a numeric mark and converted in to a closed mark using the scale given below (the numeric mark does not range from 0-100)

Closed Mark		Numeric Mark
9+	-	55 – 59
9	-	50 – 54
8+	-	45 – 49
8	-	40 –

8. Requirements for Board Certification

8.1 Completion of post MD Training Period acceptable to the Board of Study

AND

8.2 A closed mark of 9 or above for 7.3.1, 7.3.2 and 7.3.3 of the PBCA

AND

8.3 Completion of 7.3.4 and acceptance by the Board of Study

Board certification shall be deferred if above requirements are not completed. Such candidates following a counseling session/s should complete the failed component/s (10.1/10.2/10.3) again within a minimum period of 3-6 months. On successful completion at the first attempt after counseling,the date of Board certification shall be backdated. If unsuccessful, the date of Board certification will be the date of passing the subsequent assessment following further training for a minimum period of six months in a unit allocated by the BOS.

9. Method of Delivery and Learner Support System

Clinical ward based training/discussion, tutorials, small group discussions

10. Training Setting/Units and Educational Resources

Teaching will be done by the trainers approved by the board of study of Ophthalmology and the resources such as clinics, theater and library will be used as learning methods. Regular case discussions, Journal Clubs ,presentations on new surgical methods will be held regularly.

11. Details of Trainers

The current panel of Board approved trainers who are Board Certified Consultants with MD and Foreign Qualifications such as FRCS (UK) employed by the Ministry of Health. They provide an honorary service for which no payment is made by the University/ PGIM

ANNEX 1

Submission of the Case Book

A case book encompassing the management of ten selected cases under the supervision of the Consultant Ophthalmologist should be submitted three months before applying for Board Certification.
The ten case reports must preferably include cases in which some new treatment methods have being carried out. The treatment method should be finished.

The requirement for a case record book are;

(1) Recommend use of A4 size paper
The book should be with a hard cover:

(2) Record should include a full diagnosis and treatment plan of the cases

(3) The aim and objectives of treatment should be clearly stated together with the reason for adapting the method used

(4)The records presented should fully explain the reasons for adapting the procedure and results .Also discuss the alternative methods available

(5)Problems encountered during the treatment must be discussed

(6) cases should be adequately illustrated by either black and white or colour prints

(7)Record book should be accompanied by a signed statement from the supervising consultant confirming the trainees involvement of the selected cases.

ANNEX 2

Guidelines for the preparation of the Dissertation

The objective of this exercise is to expose the trainee to the procedure of identification of a problem, conducting a literature search, planning an "experimental" protocol, conducting the study, management of data (collection, analysis and presentation) and presenting rational conclusions with discussion. The Dissertation would consist of either a Orbit or Ocularplasty presentation limited to 8000 words and should include a minimum of 20 relevant recent references from the literature. The following guidelines should he used in planning and preparation of the dissertation.

1. The book should be submitted in ring bound or plastic edge bound form. This facilitates correction, which may be recommended by the assessors. The final form of the book may be in the sewn and bound form with a hard cover and this final bound book should be handed over to the PGIM seven days before commencement of the examination.

2. The book should be prepared in the English Language. Trainees are strongly advised to ensure that correct grammar is used and to check the text in the book and correct spelling mistakes, typographic errors, etc.

3. The book should be prepared on white A4 paper and typed on one side of the paper only, with minimum margins of 40 mm on the left-hand side (binding edge) and 20 mm on the other three sides (free edges). Use double spacing throughout the book. Any standard type of lettering is accepted but the same style and size should be used consistently throughout the book except when bold type for headings and italics for emphasis are used. Trainees are strongly advised to use a Word Processor for the typing of the book.

4. Pages, subsections, tables and figures should be numbered using Arabic numerals.

5. Pages should be numbered consecutively.

6. Subsections should be numbered as indicated in this section. (1, 2, 3. and 4 are subsections of section 1)

7. Tables and figures should be numbered sequentially and arranged in the appropriate place in the text.

8. The only exception to using Arabic numerals is when quoting from other sources where Roman numerals may be used.

9 The contents and arrangement of pages:
The contents should be given under the following headings:
Title and Authors name
Declaration by candidate
Dedication - Optional
Abstract
Table of contents
List of Symbols, abbreviations (if any) Introduction
General and specific objectives Review of literature Materials and methods Results Discussion
Limitations of the study Recommendations Acknowledgments References

9.1 Title: a brief and specific statement.

9.2 Abstract: Brief summary of the whole paper and not merely the conclusions in 500 words. Structured abstracts are preferred.

9.3 Introduction: state the information and facts known on the topic/problem selected for study. This would include a literature survey and a critical comment on the various aspects of these studies. From the

information available the justification for the study can be stated. The objectives of the study should then be presented.

9.4 Material and Methods: Describe exactly what was done in specific terms and in sufficient details so that the study could even be repeated by another investigator.
The sections to be included are:
Study design
Setting
Subjects
Materials and equipment Procedures and protocols Types of measurements of observations Methods of data analysis.

9.5 Results and inferences: Summarize the data with a figure, table or by graph when necessary

9.6 Discussion: Interpret the results so as to provide answers to the study question(s). Comment on the relevance of these answers to the present knowledge of the subject. Consider alternate interpretations. Comment on interesting or unexpected observations and about the method. Always comment on further follow-up research available on the subject.

9.7 Conclusion: List the main points in the discussion section as conclusion.

9.8 Acknowledgements: Thank people for funding, facilities, equipment, materials or assistance.This statement should be brief.

9.9 References: List all references that are cited in the text. The Vancouver system of listing references should be used.

Reference Style:

Type the references in double spacing in the Vancouver style (using superscript numbers and listing full references at the end of the paper in the order in which they appear in the text). Online citations should include date of access. Use Index Medicus for journal names. If necessary, cite personal communications in the text but do not include in the reference list. Unpublished work will not be accepted. References should be listed in the following style:

Journal
Seitzman GD, Gottsch JD, Stark WJ.Caract surgery in patients with Fuch's corneal dystrophy:Expanding recommendations for cataract surgery without simultaneous keratoplasty. Ophthalmology 2005; 112:441-446

Book
Sadler TW. *hangman's Medical Embryology* (5th edn). Williams & Wilkins: Baltimore, 1985; 224-226.

Book chapter
Desmet VJ, Caller F. Cholestatic syndromes of infancy and childhood. In *Hepatology: a Text Book of Liver Disease*, Zakim D, Boyer TD (eds), vol 2. W.B. Saunders: Philadelphia, 1990; 1355-1395.

Website
The Oncology Website, http://www.mit.com/oncology/
[24 April 1999].

Trainees are advised to consult the "uniform requirements for manuscripts submitted to biomedical journals" published in the New England Journal of Medicine 1997; **336:** 309-315, for further information.

9.10 Dedication of the dissertation to a person(s) is optional.

9.11 Acknowledgments should be limited to those who have significantly contributed to the training of the Postgraduate and the preparation of the dissertation.

9.12 Table of contents: All sections of' the book should be listed using Arabic numerals. The starting and end page numbers should be listed along the right margin.

9.13 List of symbols and abbreviations:

Trainees are strongly advised to use only symbols and abbreviations, which are accepted for use in scientific and medical literature. In the event of an uncommon symbol or abbreviation, which needs to be used, a brief explanatory note should be included in the list. All symbols and abbreviations with the complete terms or wording should be given in the respective lists in alphabetical order.
(Note: Units of measurements- Measurements of length, weight, and volume should be reported in metric units (meter, kilogram, litre) or their decimal multiples, Temperature should he given in degrees Celsius, Blood Pressure should be given in mm of mercury.
It is preferable if haematological and clinical chemistry measurements arc reported in the metric system in terms of the International System of Units (SI). It is recommended that uniformity be maintained throughout the book. The candidate is advised to use conversion tables.
A panel nominated by the board of study will assess the candidate's dissertation and its acceptance will determine the successful completion of the training programme.
In the event of dissertation not being accepted the candidate will be notified whether a completely new dissertation is to be prepared or whether modification of the existing one will suffice for re-submission.
A copy of the Dissertation submitted should be retained by the candidate as a safeguard in case of loss or damage to the original.