

Maharashtra University of Health Sciences

Nashik

SYLLABUS

“Fellowship Course in VITREO RETINAL SURGERY
(FVRS)”

Objective:

This is an one year fellowship program that is available for candidates desiring additional training in Vitreo Retina.

The goal of this Fellowship Programme is to provide ophthalmologists with comprehensive academic, research and clinical training in Vitreo Retina. This will include learning on the pathophysiology, evaluation, diagnosis and current Standard Management in all vitreo retinal pathologies. There will be a very strong emphasis on research, scholarly activity and teaching experience.

Programme:

The Fellowship seeks MS/DNB/MD recognised by Medical council of India. (All degrees recognised and accredited by Medical Council of India) qualified Ophthalmologists with a very strong commitment to academic evidence based medicine and research in Vitreo Retina.

Name of the Course

“Fellowship Course in VITREO RETINAL SURGERY (FVRS)”

Course Duration. : 1 year.

Course fee. : As per University rules

Eligibility for Candidate for the Award of Fellowship

MS /DNB/MD recognised Medical council of India.

The candidate cannot do other course simultaneously.

For Foreigners, Post graduate degrees equivalent to and recognised by Medical Council of India.

Evaluation of Candidate - by credit points system:

Most Fellows confuse credit based system with a different evaluation system in medical education. The credit based system is rather a scientifically accepted system which allows different weightage to different courses in a program based on its utility in the overall program structure. Over a period of time it has been identified that every program must have some learning objective defined to it. It is also accepted fact that only a flexible credit based structure can provide the best training and learning where the student can learn at his own pace and can learn what he perceives that would help him in his professional career.

The Advantages of credit based evaluation system are(1) Skilled fellows can always go for the maximum credits (2) Students can learn at their own pace. Practising Surgeons busy in practise will find it to be more suitable. Students can come back and finish the operative modules any time within a stipulated time and in any order. Only the Soft skill development in skills laboratory setup has to be finished first (3) Students get the freedom to choose and identify (4) Fellows can translate their innate capabilities to credits and get the know-how of more than one discipline increasing their horizons

Since the entire course is Credit System based, for each Module, the candidates will be assigned credits for their work by respective Faculty/Institute. The candidates may finish their modules and earn credits in Operative sessions within a certain stipulated time (maximum 3 years and minimum 1 year) in any order depending upon their availability of time and convenience. The basic credits for any system as stipulated by faculty of a particular course, however, will have to be finished first. The fellows may be rotated with different expert faculties / Institutes of a specific module so as to learn maximum from the respective experts in their actual operative module

Criteria for Institutional Recognition by MUHS

List of various training centres, hospitals & institutes should be prepared & will have MOU with MUHS for allowing the faculties to train the candidates & work in their respective institutes for the purpose of award of fellowship. The list of such institute should be prepared & maintained in accordance with & as per approved faculties by MUHS.

Criteria for Soft skill Development Centres/Training Centres/Laboratories:

The Centre must have minimum 3 years of experience in conducting teaching/fellowship courses.

In addition they should have, Infra structure and materials for conduct of course.

Well equipped Hospital with the following facilities are required

Exclusive individual rooms for retina evaluation –equipped with slit lamp, indirect ophthalmoscope and adequate lenses, Patient education and learning materials in retinal and allied disorders.

Conference hall/lecture hall –with seating capacity minimum 20

Effective case record system

Audiovisual aids –for patient education

Supportive divisions –optometry, Anterior segment, glaucoma and cornea ,Neuroophthalmologists, oculoplastic consultants and anaesthetists.

Diagnostic room equipped with Fundus Fluoroscene angiography, angiography, Fundus photo, Optical coherence tomography(OCT) and B Scan are mandatory Institute should have option to avail other diagnostic modalities like PHP,PAM , Electro physiological tests including VEP , MF ERG and ICG by collaboration with other institutes(if not available with the institute).

Laser room equipped with slitlamp and Laser Indirect ophthalmoscope and suitable lenses.

Wetlab for training.

Theatre Infra structure Vitreo Retina Department.-Well equipped theatre with Vitrectomy machine,Operating Microscope, BIOM/wide angle viewing systems, SDI, Cryo Units, Laser delivery systems, Instruments for catering all common vitreo retinal cases.

Library(Books,Journal,Videos).The library services available to fellows should include electronic retrieval of information from medical databases

Independent Department with stipulated criteria of Faculties/Teachers

A sufficient number of patients must be available to ensure that fellows receive appropriate experience in the management of complex problems without adversely affecting particular surgery core program. Specifically, a fellowship will not be approved in an institution that has a program deficiency in the pertinent areas of surgery.

Institutes with High Volume of surgery work for the specific course/module offered is preferred. Should have a workload of more than 50 cases in 2 months in respective courses/modules.

Criteria for the faculty with MUHS for Fellowship of Vitreo retinal Surgery:

Minimum 15 years' experience of Surgery in the specified course/module.

Minimum 10 years' experience of Professor/Teacher/Instructor/Faculty at various specific course Surgery training Institutes

A University Diploma/Fellowship/Doctorate in specific surgery is preferred

1. Program Director

A single program director must be responsible for the fellowship program.

a. Qualifications of the program director

The program director must be a surgeon who is qualified to supervise and to educate fellows and must meet requirements stipulated by MUHS. The director must be recognized nationally or regionally by his or her peers as a leader in the area of the program's focus.

Program director must:

Be certified by the Medical Council of India.

Be licensed to practice medicine in the state in which the sponsoring institution is located.

Maintain a cooperative working relationship with all other recognized surgical training programs

Be a member in good standing of at least one of the constituent societies

Minimum 15 years' experience of Specific/specialized Surgery

A University Diploma/Fellowship/Doctorate in Specific/specialized surgery.

Demonstrated experience and/or expertise in teaching residents, fellows, or post graduate surgeons on a regional, national or international level.

b. Responsibilities of the program director

It is the responsibility of the program director to support the fellowship program by devoting his or her efforts to its management and administration. The director is also expected to be an active and recognized participant in the institution's clinical and educational programs.

Preparation of a written statement: to include an outline of the goals of the fellowship program with respect to knowledge, skills, and other attributes, a narrative description of the fellowship, including details of fellows' involvement in clinical, research, teaching, and administrative activities, and a description of the relationship between the fellowship and the general ophthalmology residency program. This statement must be made available to fellows, general

ophthalmology residents, the director of the general ophthalmology residency program, and members of the teaching staff.

Selection and supervision of the teaching staff and other program personnel at each institution participating in the program.

Supervision of fellows through explicit written descriptions of supervisory lines of responsibility for the care of patients. Such guidelines must be communicated to all members of the fellowship program staff.

Organization and supervision of the research activities of fellows.

Organization and supervision of fellows' participation in conferences and other educational activities, and oversight of implementation of the fellowship curriculum.

Implementation of fair procedures, as established by the sponsoring institution, regarding academic discipline complaints and grievances.

Oversight of accurate tabulation and recording of operative logs by Vitreo Retinal fellows in the Fellowship case log system.

Notification in writing to Accreditation Committees of MUHS if there is change in the faculty complement for the fellowship.

2. Teaching staff / Faculties

Other than the program director, additional teaching staff with documented qualifications and a commitment to instruct and supervise fellows must be available.

Minimum 10 years experience preferred of Professor/ Teacher/

Instructor/Faculty at various Specific/specialized Surgery training Institutes

A University Diploma/Fellowship/Doctorate in Specific/specialized surgery is preferred

Staff members should have a recognized record of achievement in clinical

practice, teaching, research, or a combination of these. Faculty members should be primarily committed to the program's area of focus and have a clinical practice that supports areas of special skills. Members of the teaching staff must be able to devote sufficient time to supervisory and teaching responsibilities.

When the fellowship program is located in more than one institution, a member of the teaching staff of each participating institution must be designated to assume responsibility for the day-to-day activities of the program at that institution, with overall coordination by the program director.

The teaching staff must submit to regularly and formally review of performance in accordance with the goals and objectives of the fellowship.

General Guidelines for allotment of Credits

Total Credits: -300

Minimum Number of Credits for successful completion of programme:-240 credits

(80%)

Breakup of credits

Should be based on following Modules

a) Soft Skill Development Module:(25 credits points)

These include Working at MUHS recognised Basic Skill Institutes, wet lab training, Basic knowledge of instrumentation and Energy Sources.

b) Didactic Credits: (25 credit points)

Didactic on various topics as per syllabus spread over One Hour lecture. Total 10-20 lectures or more, depending upon specified course material and depth of theory.

Topics of Didactic lectures will depend upon the particular course/ Module offered.

c) Presentation, Publications & Project Work (Max.25credit point)

Under faculty guidance, presentations for Local, Regional ,National and International conferences.

d) Video Learning, Grand Rounds, Faculty Discussions (10 creditPoints)

Video lectures (from other institutes) : 1 credit points for each

Faculty discussion and review of educational CDs / surgical videos of conferences / proceedings of national and international conferences :1 for each

e) Sessions in Diagnostic Clinics (15 credit points)

The fellow should have adequate exposure and skills for performing and reporting diagnostic tests like OCT, FFA, ICGA, ERG, BSCAN

f) Operative session credits (150 credit points)

Candidate is expected to learn vitreo retinal surgery by observation, by assisting and by performing under assistance. Maintaining Log book indicating complete surgical exposure is mandatory for the course.

g) Fellowship Examination (50 Credit Points) (Terminal Exam by MCQs)

Three sets of question paper with 100 mcq will be set by the committee of the faculties approved by MUHS & only one paper will be selected by random process on the day of examination. Minimum 50% marks is mandatory for availing credit points.

Rotation through various institutes.

A Fellow during his tenure of one year fellows can be rotated through various institutes /faculties for total exposure to various aspects and skill in Specific/specialized Surgery. Rotations to other faculties within the course are important part of the skills curriculum. Rotations are agreed upon by the faculty and optional rotations are available upon request of the fellow and approval by the faculty program director. Upcoming interesting cases by faculty should be broadcast to all fellows through the monthly didactic meetings so freely available fellows can travel to the sites to participate or see these unusual cases.

Evaluations of the fellows by the faculty and of the faculty by the fellows will be performed at all teaching sites every quarter during the year and upon the completion of each rotation.

This requires rotation in Soft Skill Development and working at skill station and Virtual reality module (if available),Wet lab for proper hand to eye co-ordination ,basic skills, basic laboratory work and proper perspective.

Didactic Lectures /Grand Rounds/ Clinical meetings

Operative sessions in various modules/subjects/expertise in particular surgical procedure in the specified/specialized course

Operative experience will take place along with the Faculties who will be assigned by MUHS with those hospitals/ institutes who will have MOU with MUHS for training candidates.

Clinical Responsibilities

The fellow will attend and work under the faculty in the recognised institutes on the assigned modules. He/ She will participate in the preoperative assessment and planning as well as the postoperative follow-up of the assigned patients under the faculty guidance.

Expectations include: All Fellows

Demonstrate manual dexterity appropriate for their training level.

Critically evaluate and demonstrate knowledge of pertinent scientific information.

Practice-based learning and improvement that involve investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care

All Fellows will present and review current literature at Journal Clubs.

All Fellows will be expected to actively participate at local, regional and National seminars and conferences.

Maintain high standards of ethical behaviour.

Demonstrate sensitivity to age, race, gender, and culture of patients and other health care professionals

Practice high-quality, cost-effective patient care.

Demonstrate knowledge of risk-benefit analysis.

If the program director feel that the fellow is not meeting the expectations of the course, he can recommend the university to terminate the course of that fellow with in six months of joining. There after the program director can recommend university for extension of course if he/she feels that extension is required.

PortfolioManagement:

All Fellows will maintain a Fellowship portfolio. This should be submitted to the university every third month about the progress of the course.

CURRICULUM

Course Director/Programme Director is required to fill up the requirements according to guidelines presented below and submit it to University

a) Soft Skill Development Module/Laboratory Module (25 Credits)

(Please specify the subjects in chronological order required for the course and breakup of the credits allotted according to importance of the subject)

Wetlab practice -following procedures can be completed on wetlab on animal eye from slaughter house.

Taking sutures, scleral tunnels -20 times and placing the buckle.-(2)

Making ports for vitrectomy-20 times-(5)

Intravitreal Injections-20 times.(4)

Vitrectomy -10 times-(5)

IOL retrieval,Inducing RD,Settling RD-5 times-(5)

Laser practice-in eye model with slit lamp (2) and indirect (2)

b) Didactic Credits:(25Credits)

Didactic on various topics as persyllabus spreadover one Hour lecture. Total 10-20 Lectures

(The subjects in chronological order required for the course and breakup of the credits allotted according to importance of the subject)

1) Seminars (once in a month)(12 credits)

2) Journal club: (once in a month) (6 credits)

3) Case discussion :4 per month (7 credits)

4)Attendance(as per university rules for awarding fellowship)is mandatory

This study syllabus can be based on following topics

Basic Subjects

History taking relevant to Vitreo-retinal Diseases

Methods of fundus examination

Ultrasonography-theory, technique and interpretation

Fundus Fluorescein Angiography – Theory, Technique and interpretation

Electrodiagnostic studies – Electro retinography, electro oculography and Visually evoked potentials-theory, technique and interpretation

Photocoagulation-Theory, and Principles

Anatomy: Surgical anatomy of posterior segment (pars plana, vitreoretinal relationships,

Ultrastructure of retina and vitreous and other relevant anatomy

Physiology of posterior segment

Medical retinal diseases

Vascular retinopathies

Diabetic Retinopathy

Eales' disease

Sickle cell retinopathy

Vascular occlusions

Ocular Ischemic syndrome

Coat's disease

Degenerative Diseases of Retina

Retinitis Pigmentosa and Variants

Gyrate atrophy

Choroideremia

Retinoschisis and other retinal degenerative diseases

Retinal detachment and related disorders: (Clinical Diagnosis, differential diagnosis, predisposing factors, etiology)

Rhegmatogenous retinal detachment

Tractional retinal detachment

Exudative retinal detachment

Congenital and childhood disorders

Persistent hyperplastic primary vitreous

Retinopathy of prematurity

Familial exudative vitreoretinopathy

Norrie's disease, congenital retinal dysplasias and other causes of congenital retinal detachments

Colobomata of choroids and disc

Infective and related conditions:

Endophthalmitis

Toxocara retinochoroiditis

Viral retinitis

AIDS and the eye

Other parasitic diseases like cysticercosis

Oncology:

Retinoblastoma

Melanoma

Ciliary body tumors

Phacomatosis

Optic nerve head tumors

Miscellaneous – Reticulum cell sarcoma, secondaries, combined hamartoma, cavernous hemangioma of retina.

Vitreous disorders:

Hemorrhage

Asteroid hyalosis

Posterior Vitreous Detachment

Vitreoretinal interface disorders like epiretinal membranes and macular holes

Anterior Segment disorders of Importance to Vitreoretinal surgeon

Dislocated lens

Dislocated IOL

After Cataract and other papillary membranes

Irvine Gass syndrome and Vitreous wick syndrome

Complicated Cataract

Malignant Glaucoma

Macular disorders

Macular hole

Heredomacular diseases

Epimacular Proliferation

Age related macular degeneration and other causes of Choroidal

Neovascular membrane

Cystoid macular edema

Macro aneurysm

Idiopathic parafoveal telangiectasia

Traumatic disorders

Globe rupture

Double perforations

Intraocular foreign body

Surgery for Vitreoretinal Diseases

Basic:

Pre operative preparation

Instrumentation for scleral buckling and vitreoretinal surgery Infusion fluids and buckle materials

Vitreous substitutes – SF6, C3 F8, Silicone oil, perfluoro carbon liquid

Techniques of scleral buckling – Implant, explant techniques

Intravitreal Injections in retinal pathology

Pneumatic retinopexy

Basic vitreous surgery

Membrane removal techniques

Fluid air exchange

Endolaser and endocryo

Retinotomies and retinectomies

Surgical Management of Specific diseases:

Giant retinal tear with RD

Retinal detachment with Proliferative Vitreoretinopathy

Macular hole

Epimacular proliferation

Submacular surgery

Retinopathy of prematurity

Retinoschisis

Endophthalmitis

Dislocated lens, nucleus, IOL

Intraocular cysticercosis and other parasites

Traumatic complications such as vitreous hemorrhage, dialysis, GRT and tractional and combined retinal detachment, IOFB.

Combined penetrating Keratoplasty and Vitreoretinal surgery

Miscellaneous and other topics– Ectatic scleral disorders, eye wall resection

Artificial Retina and newer developments

Complications during Vitreo retinal surgery

Anaesthesia and its complications in ocular surgery

Patient counselling and its importance

Medical Clearance before ocular surgery

Epidemiology in Vitreo Retina

Research methodology in Vitreo Retina

Text books recommended

Vitreous micro Surgery by Steve Charles

Retina by Stephen J Ryan

Stallards Eye surgery

American academy of Ophthalmology Series-Retina and Uvea

Gass Atlas of Macular disorders

Retinal Detachment –Ronald G Michels

c) Publications, Presentation &Project Work (Max.25credit point)

Publication in peer reviewed journal as first author is mandatory (8 credit points)

Fellow should do presentations for Local, Regional ,National and International conferences under faculty guidance.

Local conferences-Paper/poster credit 2 (author) credit 1 (co author)

National Conferences- Paper/poster credit 3 (author) credit 2 (co author)

International Conferences-Paper/poster credit 4 (author),credit 3 for co author.

Videos presentations-Credit 4 (author) credit 2 (co author)

d) Sessions in Imaging Clinics (15 credit points)

OCT-Minimum 100 (4)

FFA-Minimum 50 (5)

ICG-Minimum 10 (2)

ERG –Minimum 5 (1)

B Scan-Minimum 50 (3)

e) Video Learning, Grand Rounds, Faculty Discussions (10 credit points)

Video lectures (from other institutes) : 1 credit point for each

Faculty discussion and review of educational CDs / surgical videos of conferences / proceedings of national and international conferences : 1 credit point for each

f) Operative Session Credits and Logbook (150 credit points)

Operative Credits has to be given based on surgical exposure in Vitreo Retina.

The candidate should have adequate knowledge, exposure by observation, assisting and performing cases under assistance. A Candidate is expected to maintain certified Log book indicating number of cases assisted or individually operated under the guidance of faculty for each Module. Submission of logbook is mandatory. It is mandatory that case logs are entered by each fellow into the Specified Surgery/Course Fellowship Case Log. The logbook carries a maximum of 25 credit points.

It is mandatory that total no of cases operated should not be less than 30.

The credit points can be availed based on

Cases observed (20 credits)- Minimum 20 cases

Cases assisted (40 credits) -Minimum 10 cases

Performed under assistance (50 credits)- Minimum 10 cases

Performed independently (6 credits per case)-optional as per institutional policy

Intravitreal Injections Assisted (15 credits) Minimum 5

Intravitreal inj performed under assistance(25 credits) Minimum 5

g)Fellowship Examination(50 credit points)

The examination for a particular course may be conducted according to the requirement of a course.

The examination should be of MCQ type for judging overall proficiency of a Fellow.

Three sets of question paper with 100 mcq will be set by the committee of the faculties approved by MUHS & only one paper will be selected by random process on the day of examination. Minimum 50% marks is mandatory for availing credit points.

On successful completion of all modules of the Programme the Fellow will be awarded a Certificate of the Fellow in Vireo Retinal Surgery.