UKM VITREORETINAL FELLOWSHIP TRAINING PROGRAMME

Programme Name: FELLOWSHIP IN VITREORETINAL DISEASES & SURGERY
Course Director: Prof. Dr. Mae-Lynn Catherine Bastion, Assoc. Prof. Dr. Mushawiahti Mustapha (Part-time) & Assoc. Prof. Dr. Norshamsiah Md. Din
Duration of Training: 1-year for international candidate & up to 3 years for local candidate
Training Centre: UKM Medical Centre (UKMMC) @ Hospital Canselor Tuanku Muhriz Cheras (HCTM) Jalan Yaacob Latif Bandar Tun Razak 56000 Cheras Kuala Lumpur
Availability Places: 1 per year (2023 onwards)

1. INTRODUCTION

The UKM Vitreoretinal (VR) Fellowship Training Program is designed to provide an opportunity for appropriate clinical training and clinical or vision science research related to surgical retinal disease. The training period is divided into 3 phases, the first phase is necessary to assess the suitability of the trainee for further training.

Eligibility:

1. Must possess a recognizable Medical Degree and certificate of qualification of Ophthalmology specialist training eg. Post-Graduate Medical Degree qualification in Ophthalmology, that is registrable with the Malaysian Medical Council (MMC)
2. Registration with Specialist Board (Ophthalmology) of country of origin (if applicable) eg National Specialist Registry (Malaysian)
3. Letter of sponsorship and/ or financial warranty from the candidate
4. Must submit a list of relevant workshops, courses and short training programmes attended
5. Must submit the names of at least two referees, at least one of whom has directly supervised the candidates and is able to submit a report on the candidates' clinical skills, practice, attitude and competence
6. Must have been in active clinical practice for at least 1-year post specialist qualification

Objectives of Programme:

1. In terms of clinical practice, to be a competent vitreoretinal subspecialist capable of independent practice
2. In terms of knowledge, to acquire and impart working knowledge of the theoretical basis of the specialty including its foundations in the basic medical sciences
3. In terms of lifelong learning, to be equipped with lifelong learning skills including appraisal of research reports, audits, continuous improvement skills, and perform a research study in this discipline, as demonstrated by submitting a manuscript for publication
4. In terms of ethics, to be able to uphold a high level of professional and medical ethics, including respecting diversities and patients' choices in a professional manner

5. In terms of communication, to be able to communicate with patients in an effective manner
6. In terms of system based practice, to be able to understand and improve on the practice system to provide excellent outcome for patient care

Selection Process for fellowship position:

1. Evaluation of fulfilling the entry criteria by the university (UKM) and Malaysian Medical Council (MMC)
2. Attend a selection interview with fellowship director/ designee either face to face or via tele-interview (international candidate only).

Pre-requisite for fellowship exit certification:

1. Place and duration:
   i) Local candidate must train for 3 years in established National Centre, which will include 1-2 years in Department of Ophthalmology, UKMMC, and at least 1-year placement in a recognized centre in Malaysia or overseas, other than Department of Ophthalmology, UKMMC, OR
   ii) International candidate must train exclusively in UKMMC for 1-year, AND
2. Successfully conduct and complete a research study in UKMMC by the completion of training, AND
3. Obtain a Pass in the UKM Fellowship Exit Examination

Assessment of Competency:

1. Completion of the training logbook, including endorsement by the consultant of the various clinics, fellowship director and the Head of Department of Ophthalmology, UKMMC, AND
2. Demonstrated competency according to the programme objectives, AND
3. Evidence of submission of the research study manuscript to a peer-reviewed journal, AND
4. Exit Examination

Termination Clause:

Candidates who fail to demonstrate good progress in the course of training, and did not fulfil the training requirements stipulated above, will be subject to termination of fellowship training.

Successful Completion Clause:

Certificate of completion of training certified by Course Director and Dean, Faculty of Medicine UKM will be given to all successful candidates.

2. PROGRAM OVERVIEW

The VR fellowship training programme entails experience in various areas of the Vitreoretinal Subspecialty practice.

Trainees are expected to undertake at least one research project that can be accomplished during any phase of the training period. This project, which may be a clinical study or an applied research project in the laboratory, is performed in cooperation with the supervisor. The candidate is expected to discuss with their Course director the project to be undertaken at the commencement of the programme. Collaboration with other researchers including biochemists, physiologists, pathologists, anatomists and clinical ophthalmologists may be necessary. The results of these studies are expected to be submitted for publication in peer reviewed journals.

Participation in quality assurance activities is encouraged. During their training the trainees are required to conduct a surgical audit on surgeries performed. In addition trainees are expected to contribute to the teaching of general ophthalmology and junior VR trainees. Regular attendance and active participation at teaching sessions are expected.

The duration of training consists of 3 phases.

1. Year 1:Phase 1A and Phase 1B
2. Year 2: Phase 2
3. Year 3: Phase 3

Appendix 1-2: Procedural Skills and Milestones

Appendix 3: Continuous Assessment Forms

3.1. Year 1: Phase 1A (1st 6 months) and Phase 1B (2nd 6 months)

3.1.1. Objectives: To acquire basic clinical and surgical skills and corresponding knowledge of vitreoretinal disorders.

a. To acquire theoretical knowledge on applied anatomy, physiology, pathology and management related to surgical vitreoretinal disorders

b. To acquire basic skills in the use of instruments in the examination and diagnosis of patients with vitreoretinal disorders.

c. To acquire basic clinical skills in the preoperative and postoperative management of patients requiring vitreoretinal surgery

d. To acquire basic skills in the performance of simple VR surgery and related procedures

e. To acquire skills in the conduct of clinical research and surgical audit

3.1.2. Learning Outcomes: Possess basic understanding and gain competence in the following:

a. Pathogenesis and pathoanatomy of surgical retinal disorders

b. Examination and diagnosis of common surgical retinal disorders

c. Outlining management plan

d. Use of the following equipment:

i. Lenses used in posterior segment examination

ii. Indirect Ophthalmoscope with scleral indentation

iii. B Scan Ultrasound

iv. Fundus Camera

v. OCT

e. Performance and interpretation of retinal angiography and imaging

f. Performance of the following procedures:

i. Retinal Cryopexy

ii. Indirect Retinal Laser Photocoagulation

iii. Vitreous tap/biopsy/intravitreal injections

iv. Pneumatic Retinopexy

v. Scleral Buckling with or without SRF drainage and air injection

vi. Vitrectomy for Vitreous haemorrhage, dislocated lens/IOL and retinal detachment without significant PVR

3.2. Phase 2

3.2.1. Objectives:

a. To acquire skills in the performance of more complex procedures in VR surgery.

b. To enhance skills in the conduct of clinical research and surgical audit.

3.2.2. Learning Outcomes – Possess basic understanding and gain competence in the performance of the following procedures:

a. Vitrectomy with ERM/ ILM peel

b. Retinotomy/ retinectomy

c. Vitrectomy for rhegmatogenous retinal detachment with PVR

d. Management of Giant Retinal Tear

e. Diabetic Vitrectomy

f. Management of Ocular Trauma with or without intraocular foreign body

g. Vitrectomy for Endophthalmitis

3.3. Phase 3

3.3.1. Objectives:

a. To consolidate and enhance knowledge and skills acquired in the management of all surgical VR disorders

b.To acquire skills in the teaching and supervision of junior VR trainees and postgraduate students

c. To continue to enhance skills in the conduct of clinical research and surgical audit

3.3.2. Learning Outcomes- Gain competence in and conducted the following:

a. Performance of all procedures mentioned above

b. Surgical audit on surgeries performed

c. At least 1 clinical research project performed, preferably published in peer reviewed journals

Note: The Phases above are a guide only. There is expected to be overlaps in the Phases. A highly competent candidate is permitted to progress more rapidly to the next Phase according to competency. Whereas a less competent candidate needs to achieve competency in each Phase before they can be permitted to progress to the next Phase.

4. LEARNING OUTCOMES

At the end of the training period trainees would demonstrate competency in:

4.1. Acquired skills in the prevention, diagnosis, treatment and rehabilitation of surgical vitreoretinal diseases

4.2. Developed and enhanced their skills in performing both clinical and basic research

4.3. Developed an understanding and appreciation of the value of clinical audit/research in advancing knowledge and improving practice

4.4. Developed an appreciation of the importance of teamwork and contribution to continuing medical education

4.5. Developed an awareness of the limits of their own knowledge and have insight into their own difficulty in understanding complex interactions

5. EVALUATION

5.1. Assessment of supervisors' reports

5.2. Review of log book (mandatory at minimum 6 monthly)

5.3. Review of surgical audit (mandatory at minimum 6 monthly)

5.4. Evaluation exam (at the end of phase 3 for local candidates and end of phase 1 for international candidates)

5.4.1.1 **Local candidates** will undergo Exit Certification (at the end of phase 3) comprising:

5.4.1. Exit interview

a. Panel of assessors appointed by Head of Department of Ophthalmology, UKM -review log book, surgical audits, observe trainee in working environment/ 2 surgical video including macula surgery and retinal detachment repair eg, review of continuous assessment by supervisor.

b. Viva – 30 minutes

c. Presentation of research project – 30 minutes

(Passing score of 50/100 required in each section)

5.4.1.2 **International candidates** will undergo Evaluation (at the end of phase 1) comprising/ local candidates under mobility programme of 1 year will undergo similar Evaluation (end of each phase):

a. Panel of assessors appointed by Head of Department of Ophthalmology, UKM - review log book, surgical audits, observe trainee in working environment/ 1 surgical video, review continuous assessment by supervisor.

b. Viva - 20 minutes

c. Presentation of research project/ audit - 20 minutes

(Passing score of 50/100 required in each section)

5.5 Successful candidates will receive the following:

5.5.1 Local candidates – Fellowship Exit/ Completion Certificate of completion of 3 years training certified by Course Director and Dean, Faculty of Medicine UKM

5.5.2 International candidates – Fellowship Attendance Certificate of completion of 1 year training certified by Course Director and Dean, Faculty of Medicine UKM, and recommendation to pursue no less than 2 years of further supervised training in their home country (if available)

Note: Candidates who attend the course but fail to achieve competency according to the set criteria may still, at discretion of the course director and Head of Department of Ophthalmology, UKM, receive an attendance certificate or appropriate certificate to verify the level of training received/ achieved.

7. INSTITUTIONAL OBLIGATION

7.1 The fellow is required to abide by all the rules and regulations of the Universiti Kebangsaan Malaysia and UKMMC throughout the entire duration of programme. Student Charter may apply.

7.2 The fellow will be subjected to any additional UKMMC regulations and requirements for all medical staff and personnel

ACKNOWLEDGEMENT:

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REFERENCE:

The MOH Fellowship Module (updated Jan 2020)

APPENDIX 1

CORE PROCEDURE SKILLS

On the completion of fellowship programme the trainee would have assisted and performed the following procedures: (This list is a guide only)

	Procedure	Minimum Requirement	
		Assisted	Performed (year 3)
1.	Retinal Cryopexy	3	10
2.	Indirect Retinal Photocoagulation	1	15
3.	Vitreous tap/intravitreal injections	1	10
4.	Vitreous biopsy	1	2
5.	Pneumatic Retinopexy	1	3
6.	Scleral Buckling	5	20
7.	Vitrectomy with or without internal tamponade/ membrane peel/ retinotomy/ retinectomy		
	Vitreous Haemorrhage	3	10
	Endophthalmitis	2	2
	Dislocated Lens/dislocated lens fragments	3	5
	Dislocated IOL	1	5
	Retinal Detachment Repair without Proliferative Vitreoretinopathy	5	20
	Retinal Detachment Repair with Proliferative Vitreoretinopathy	5	10
	Management of Giant Retinal Tear	3	3
	Combined vitrectomy and scleral buckling	5	5
	Repair of Macula Hole / ILM peel	5	10
	Epiretinal Membrane Peel	3	10
	Management of Advanced Diabetic Eye Disease	10	30

	Management of Ocular Trauma without intraocular foreign body	3	5
	Management of Ocular Trauma with intraocular foreign body	3	5

APPENDIX 2

SUGGESTED MILESTONES IN VITREORETINAL FELLOWSHIP TRAINING (Year 1 for local and international fellow (Phase 1A and 1B); Year 2 & 3 for local fellow)

PARTS		Year 1 (1st half)	Year 1 (2nd half)	Year 2 (local fellow)	Year 3
General (Knowledge/Expectation/Basic Know-how)					
1	Adjust to VR setup; History and Milestones, OT setup	X			
2	Time management plan: Weekdays/ Weekends/ Leave for the year	X			
3	Manage schedule (Clinic & Surgery) and Appointments	X			
4	Clinical findings/ Diagnosis/ Prognosis/ Plan	X			
5	VR Documentations (ensure complete documentation: retrievable info for future study)	X			
6	Data management and data collection plan for own audit/ logbook	X			
7	Explain to patients about Surgery, Complications, Prognosis, possibility of further interventions (Risk/benefit)	X			
8	Review OT List: findings, diagnosis, procedure and resources needed (in OT)	X			
9	Assists/ Support General Services: Phaco, Diabetic Retinopathy, MR and other preventive programs as required	X			

10	One day before op: Pre-Op assessment & Review of surgical plan	X			
11	One day after op: Post-Op assessment & plan	X			
12	Monthly Team Discussion/ Journal Discussion	X			
13	Collective VR Unit Audit (Redetachment, Case cancellation, Adverse Events)	X			
14	Scleral buckle and techniques	X			
15	Vitrectomy systems and techniques	X			
16	Viewing system: Uses	X			
18	Vital stains and Endotamponade	X			
19	Slit lamp	X			
20	Binocular indirect ophthalmoscopy	X			
21	Laser indirect ophthalmoscopy	X			
22	VR instruments and use/ safety/ options	X			
23	Resources Management (Time, personnel, asset and consumables) based on local data collected	X			
24	Medical Retina attachment (Optional)			X	
25	Public Health and Cataract Service - as needed		X		
PROCEDURES (Part of case)					
1	Local Anaesthesia (Different techniques/ approach)	X			
2	Indirect Laser (Pan retinal photocoagulation, breaks)	X			
3	Painting and Draping	X			
4	Intravitreal Injection	X			
5	Phacoemulsification (combined cases/ post vitrectomy cataract)		X		

6	Pneumatic (+Retinopexy/ Displacement of subretinal blood)	X			
7	Trocar/ cannula insertion (Different techniques)	X			
8	Core Vitrectomy	X			
9	Induction of Posterior Vitreous Detachment	X			
10	Removal of oil (Different approaches)	X			
11	Internal Search	X			
12	Scleral indentation	X			
13	Endolaser/ Cryotherapy	X			
14	Air fluid exchange		X		
15	Endotamponade: Oil Injection		X		
16	Endotamponade: Gas Injection		X		
17	Lens Fragmentation		X		
18	Membrane delamination/ segmentation/ excision (Diabetic)		X		
19	Peritomy/ Anchoring of muscles	X			
20	Buckling	X			
21	Retinotomy		X		
22	Retinectomy			X	
23	Vitreous sampling		X		
24	Membrane Peeling (Internal limiting membrane/Epiretinal membrane)		X		
CONDITIONS (Complete case)					
1	Rhegmatogenous retinal detachment	X			

2	Dropped Nucleus/ dislocated intraocular lens		X		
3	Macula hole/ Epiretinal membrane		X		
4	Diabetic tractional/ rhegmatogenous retinal detachment (TRD/RRD)		X		
5	Diabetic VH (no TRD/ RRD)	X			
6	Giant retinal tear			X	
7	Intraocular foreign body			X	
8	Age related maculopathy with breakthrough bleeding		X		
9	Endophthalmitis		X		
10	Chronic RRD (Retinectomy)			X	
12	Vitreous Biopsy		X		
13	Choroidal Biopsy				X

APPENDIX 3: CONTINUOUS ASSESSMENT (MINIMUM 6 MONTHLY)

VITREORETINAL SURGERY SUBSPECIALTY TRAINEE EVALUATION FORMAT

NAME: …….. PHASE/YEAR: ……

CENTRE: ……..POSTING DURATION:……

A	KNOWLEDGE AND CLINICAL SKILLS (Supervisor to please give a score for knowledge and clinical skills)			
No.	Learning Outcomes	Requirement	Achievement (Score)	Remarks Adequate/ Not Adequate
1.	Possess knowledge on anatomy, physiology and pathology of the retina and vitreous	Attained in Phase 1A		
2.	Possess basic understanding of the pathogenesis and clinical presentation of surgical retinal disorders	Attained in Phase 1A		
3.	Gained competence in basic posterior segment examination skills	Attained in Phase 1A		
4.	Gained competence in the assessment of patients with Vitreoretinal disorders and decide on treatment options	Attained in Phase 1A		
5.	Possess knowledge on the use of and interpretation of A & B Scan	Attained in Phase 1A		
6.	Gained competence in the performance of and interpretation of retinal	Attained in Phase 1A		

	angiography and imaging			
7.	Possess skills in counselling of patients requiring VR surgery	Attained in Phase 1A		
8.	Has the ability to properly follow up ,detect and manage complications in patients following VR surgery	Attained in Phase 1A		

SCORE (Refer to Clinical Competency Record Form for detailed description on score with regards to assessment of knowledge, inquiry skills, diagnostic ability, patient management and technical skills)

Excellent 5 Good 4 Satisfactory 3 Borderline 2 Weak 1

B		SURGICAL/PROCEDURAL SKILLS (Trainee to fill in numbers observed, assisted and performed in the "Achievement" column)			
No.	**Learning Outcomes**	**Requirement (international fellow – 1 year)**	**Requirement (local fellow – by 3 years)**	**Achievement (Score)**	**Remarks Adequate/ Not Adequate**
1.	**Retinal Cryopexy**				
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		
2.	**Indirect Retinal Laser Photocoagulation**				
	Observed	3			
	Assisted				
	Performed under direct supervision	5	**10**		
3.	**Vitreous tap/intravitreal injections**				
	Observed	3			
	Assisted				
	Performed under direct supervision	10	**30**		

4.		**Vitreous biopsy/ sampling**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		
5.		**Pneumatic Retinopexy**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		
6		**Scleral Buckling with or without SRF drainage**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**5**		
7		**Vitrectomy for Vitreous Haemorrhage**			
	Observed	3			
	Assisted				
	Performed under direct supervision	5	**10**		
8		**Vitrectomy for Endophthalmitis* depends on case availability**			
	Observed	3			
	Assisted				
	Performed under direct supervision	1	**3**		
9		**Vitrectomy for Dislocated Lens/dislocated lens fragments/IOL removal**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		
10		**Vitrectomy for Dislocated IOL Removal/Exchange**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		

11		**Vitrectomy for Retinal Detachment Repair without Proliferative Vitreoretinopathy**			
	Observed	3			
	Assisted				
	Performed under direct supervision	5	**10**		
12		**Vitrectomy for Retinal Detachment Repair with Proliferative Vitreoretinopathy**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		
13		**Vitrectomy for Management of Giant Retinal Tear**			
	Observed	3			
	Assisted				
	Performed under direct supervision	0-1	**5**		
14		**Combined Vitrectomy and Scleral Buckling**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		
15		**Vitrectomy for Repair of Macula Hole/ILM Peel**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		
16		**Vitrectomy for Epiretinal Membrane Peel**			
	Observed	3			
	Assisted				
	Performed under direct supervision	5	**10**		
17		**Vitrectomy for Management of Ocular Trauma without intraocular foreign body**			
	Observed	3			
	Assisted				
	Performed under direct supervision	3	**10**		

18		**Vitrectomy for Management of Ocular Trauma with intraocular foreign body**			
	Observed	3			
	Assisted				
	Performed under direct supervision	1	**10**		
19		**Vitrectomy for Management of Advanced Diabetic Eye Disease**			
	Observed	3			
	Assisted				
	Performed under direct supervision	5	**10**		
20		**Principle of management of retinal dialysis**			
	Observed	2			
	Assisted				
	Performed under direct supervision	3	**3**		

OVERALL COMMENTS (Include research progress, trainee's participation in teaching activities and attitude towards assignment of administrative duties)

…….. Date: ……

Supervisor's Signature