REGULATIONS AND CURRICULUM GOVERNING

FELLOWSHIP IN TRANSPLANT NEPHROLOGY PROGRAM

(2023-24)

Name of the Constituent Unit/Centre: Faculty of Medicine



YENEPOYA
Deemed to be University

Deralakatte, Mangalore, Karnataka.

NOTIFICATION

YENEPOYA

NAAC A+

YENEPOYA (DEEMED TO BE UNIVERSITY)

OFFICE OF THE REGISTRAR

No.: 52-ACM/04/2023 Date: 22.9.2023

NOTIFICATION

Sub: Starting of Fellowship Program in Transplant Nephrology reg.:-

Ref: 1. Resolution of the Academic Council at its 52nd meeting held on 17.08.2023 vide agenda-04.

2. Resolution of the Board of Management at its 63rd meeting held on 21.09.2023 vide agenda-03.

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Pursuant to the resolutions cited in the above references, the Yenepoya (Deemed to be University) hereby notifies the commencement of the Fellowship Program in Transplant Nephrology in the Department of Nephrology under the Faculty of Medicine from the academic year 2023-2024.

The curriculum and regulations governing the program have also been approved by the above bodies.

REGISTRAR

To:

PA to Vice Chancellor
Dean of Academics, Yenepoya (Deemed to be University)
Controller of Examinations
Dean, Faculty of Medicine
Principal, YMC
Head, Department of Nephrology
File Copy

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Preamble

More than 2.5 Lakh people suffer from last-stage kidney diseases every year. In that 7 out of 10 patients go for dialysis and nearly 6 out of those 10 can't continue due to heavy treatment fees.

There are various dialysis centers available but they are majorly based in cities.

It is a fact that India is the diabetes capital of the world, and an increase in diabetes patients also leads to a proportionate increase in the number of Chronic Kidney Disease patients. As a majority of patients suffering from kidney disease come up at the end stage, dialysis and kidney transplant become the only option.

Post-transplant, one of the major challenges is to sensitize the patient about the importance of post transplant care as any negligence can worsen the condition further and even be fatal.

There is huge demand for specialist for comprehensive management of end stage kidney diseases and renal transplant. Transplant nephrology is a very specialized profession which demands critical skills with more compassionate approach and sound understanding of ethical and legislative aspects of organ donation.

This is post doctoral fellowship course in renal transplant. The fellows will have hands on approach in renal transplant. Course will cover pretransplant immunological work up, management of transplant donor and recipient and post transplant management of complications and follow up.

Yenepoya medical college is providing comprehensive care through the Nephro-Urology care center from more than a decade. We have MCh urology program from last 6 years. We have all the expertise, clinical material, infrastructure to offer fellowship program in transplant nephrology.

PROGRAM CODE -TN04

Eligibility for admission

Post DM (Nephrology) / DNB (Nephrology)

Aim of the Program/Course: To provide high-level in-house clinical training in transplant nephrology for eligible candidates so that the trained fellow gain experience, knowledge and competency in transplant nephrology to practice renal transplant.

Objectives/Outcomes of the program

(Knowledge/Skill/Attitude/Communication)

Program Outcomes

Knowledge domain

P01. Demonstrate ability to take a detailed history and undertake physical examination of a potential kidney donor/recipient or kidney transplant recipient

P02. Demonstrate knowledge on transplant immunology and all facets of clinical renal transplantation.

P03. Undertake pre, peri and post operative management of renal transplant patients.

P04. Demonstrate knowledge about management of long-term post-transplant recipients.

P05. Gain firsthand knowledge of pre-transplant work up of any solid organ recipient.

P06. Acquire knowledge for interpretation of slides for clinic-pathological correlation

PO7. Demonstrate knowledge about regulatory policies and practices prescribed by the hospital in line with National organ transplant program of Government of India.

Skill Domain

P08. Develop skills to perform transplant surgery –perfusion of allograft , intra operative and immediate post operative management.

P09. Acquire clinical skill to undertake patient and donor evaluation and preparation for living and deceased donor transplantation.

P010. Understand and describe surgical techniques in donor nephrectomy and kidney transplantation.

P011. Diagnose and manage acute peri-operative and post-operative early transplant complications.

P012. Assist/Perform Ultrasound (POCUS) and doppler of transplant kidney.

P013. Attain basic skills in biomedical research including critical analysis of medical literature and generating research questions, hypothesis and undertake research projects.

Attitude/Communication Domain

P014. Demonstrate ability to perform an adequate psychosocial assessment of donors, candidates or recipients.

P015. Acquire skills to communicate effectively with patient and next of kin by providing empathic, compassionate, confident and evidence-based counselling of kidney transplant options and post-transplant complications

P016. Demonstrate ability to practice according to ethical principles of providing or withholding of clinical care, confidentiality of patient information, obtaining informed consent and general practice of medicine

Program Specific Outcomes

- PSO01. Understand the presentation (history and clinical examination), evaluation and management of common renal disorders.
- PSO02. Know what is involved in a transplant work-up?
- PSO03. Assess the suitability of a patient for renal transplant and appreciate the issues of transplantation
- PSO04. Formulate appropriate treatment plan

- PSO05. Be conversant with counseling techniques for the recipients/ donors / family members and primary care takers.
- PSO06. Communicate effectively and demonstrate caring and respectful behavior when interacting with patients and their families.
- PSO07. Adopt ethical principles in all aspects of nephrology practice/ research. (Professional honesty and integrity, humility, informed consent, counseling and recognize patients' rights and privileges).
- PSO08. Perform competently all medical and invasive procedures, i.e., (a) percutaneous renal biopsy of native and transplanted kidneys, (b) placement of temporary vascular access or peritoneal catheter for renal replacement therapy (RRT), (c) Perform haemodialysis, acute and chronic peritoneal dialysis and continuous renal replacement therapy, and (d) Urine analysis.
- PSO09. Develop desired skills to independently manage emergency situations related to renal disease.
- PSO10. Acquire knowledge for the prevention of renal diseases.
- PSO11. Develop the expertise to perform a scientific study including formulating hypothesis, research questions, designing appropriate study, analyze and interpret the results.
- PSO12. Demonstrate competence in presentation of case reports, short study findings at institute level, regional, or national professional and scientific society meetings.
- PSO13. Demonstrate ability to comply and participate in regulatory policies and practices prescribed by the hospital in line with National organ transplant program of Government of India.
- PSO14. Demonstrate ability to appropriately perform open disclosures of transplant-related adverse events.
- PSO15. Explain the risks and benefits of renal transplant procedure and listen compassionately patient's preferences and expectations.
- PSO16. Demonstrate satisfactory performance of percutaneous biopsy of native and transplant kidneys
- PSO17. Appreciate administrative skills to manage multi disciplinary team including nurses, pharmacists, residents, rehab services, social workers and nutritionists
- PSO18. Assist/Perform transplant kidney biopsy procedure.

- PSO19. Understand and interpret radiological imaging of renal allografts.
- PSO20. Demonstrate skill to safely interpret histocompatibility tests and be able to interact with the histocompatibility team for further analysis and interpretation.
- PSO21. Conduct transplant kidney biopsies and interpret under microscope under supervision of specialized renal pathologist.
- PSO22. Recognize and manage surgical complications in collaboration with transplant urologists.

Program structure

Duration of the course	13 months
Theory	4 hours per week
Practical and Clinics	12 hours per week
Contact hours	42 hours per week
E-learning hours	4 hours per week
Research Work	2 hours per week
Self-Directed Learning	6 hours per week
Clinical services/ Diagnostic services	18 hours per week

Attendance

80% Attendance

Syllabus / Course contents

Basic Sciences and Applied Sciences

Anatomy

Diagnostic Evaluations

Immunology and Immunogenetics of transplantation.

Histocompatibility testing.

Transplant pharmacology.

Epidemiology of renal disease and approach to a patient with renal disease

Laboratory assessment of kidney disease: Clearance, urinalysis and kidney biopsy.

Interpretation of urine electrolyte and acid-base parameters.

Radiologic assessment of the kidney

Organ procurement, preservation and allocation of kidneys from deceased donors.

Psychosocial and economic aspects of kidney donation and transplantation.

Legal and ethical aspects of kidney donation and transplantation.

Pre-transplant evaluation and management of the transplant candidate.

Pre-transplant evaluation and management of the kidney donor.

Management of dialysis patients on the waiting list.

Surgical techniques of kidney donation and transplantation.

Physiology of the transplanted kidney.

Perioperative management of kidney transplant candidates and donors.

Post-operative management of kidney transplant recipients and donors.

Epidemiology of major causes of post-transplant morbidity and mortality.

Management of EARLY post-transplant complications.

Management of LATE post-transplant complications.

Diagnosis, prophylaxis and management of post-transplant rejection.

Infectious diseases in kidney transplantation.

Kidney transplantation in various disease conditions

Technical and practical aspects of performing kidney transplant biopsies.

Interpretation of kidney transplant biopsies and histopathology.

Use and interpretation of radiological tests in kidney transplantation care.

The management of the elderly transplant recipient.

The management of the failing kidney transplant and return to dialysis.

Overview of administration, legislation and leadership in operating a kidney transplant programme.

Fundamentals of research methodology and principles of clinical ethics and professionalism

Recent Advances Apart from the topics listed above, the advances in the field of nephrology would include relevant publications of importance to the field of Nephrology including in review articles, original publications and communications at premier scientific meetings in Nephrology.

Teaching - Learning methods and Academic Activities

Teaching - Learning method	Academic Activities
Experiential learning	Case presentation
Integrated/Inter-disciplinary learning	Scientific society meetings/ Clinical Meet, Grand round
Participatory learning	Journal club, Seminar and interactive lectures, Grand rounds,

Problem-solving methodologies	Clinical Audit, Transplant Meeting
Self-directed learning	Research work, Portfolio
Patient-centric and Evidence-based learning	Case presentation, Transplant meetings
Project-based learning	Research work
Any other : Visits to institutes	Visits to other institution of excellence Visit to laboratories, diagnostic facilities, affiliated clinical units and other areas.

Scheme of Examination

Internal Assessment (Frequency, Pattern-Theory and Practical)

Formative assessment: - Assessment of academic activities like journal club, seminar, case presentation, clinical meets and clinical audits, etc

Internal Assessment: Theory and Practical Examination of 50 marks each.

Theory paper will consist of 5 long essays

Practical examination:

OSCE (Objective Structured Clinical Examination) 2 Stations with one observation station	20 Marks
Practical Skills Demonstration. / Two short Case	30 Marks
Total	50 Marks

University Examination (Pattern-Theory and Practical)

The final Examination: Theory and Practical Examination of 100 marks each.

Theory paper will consist of 10 long essays

Duration of Theory Papers: 3 hours

Practical Examination : -

OSCE (Objective Structured Clinical Examination) 2 Stations with one observation station	20 Marks
1 Long Case/ 1 short case	50 Marks
Viva Voce: Discuss case scenarios, complex concepts, clarity of subject, case-based discussions, etc.	20 Marks
Portfolio	10 Marks
Total	100 Marks

Eligibility to appear for University Examination

Minimum 80% attendance

At least one presentation/poster in international/national/state conferences.

Portfolio submission

Criteria for pass

Minimum 50 % marks in Theory

Minimum 50 % marks in Practical.

Declaration of Results

Declared by the Yenepoya (Deemed to be University)/ Yenepoya Medical College

Logbook/Portfolio (if applicable)

Portfolio should record the learning experiences with reflections and which must be countersigned by the course director

Recommended books

1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier
2. Davison AM, editor. Oxford Textbook of Clinical Nephrology Volume 3. Oxford University Press, USA; 2005.
3. Morris P, Knechtle SJ. Kidney transplantation: principles and practice. Elsevier Health Sciences; 2008 Jun 30.
4. Knechtle SJ, Marson LP, Morris PJ. Kidney Transplantation-Principles and Practice E-Book: Kidney Transplantation-Principles and Practice E-Book. Elsevier Health Sciences; 2019 Aug 31.
5. Wein AJ, Kavoussi LR, Partin AW, et al. Campbell-Walsh-Wein Urology. 12th ed. Philadelphia: Saunders Elsevier; 2020.
6. Indian Council of Medical Research. National Ethical Guidelines for Biomedical and Health Research involving Human Participants. New Delhi; 2017. Available from: https://icmr.nic.in/guidelines/ICMR_Ethical_Guidelines_2017.pdf

Journals

1) Kidney International-Elsevier

2) American Journal of Kidney diseases -Elsevier

3) Journal of American Society of Nephrology-LWW

4) Nephrology Dialysis and Transplantation-Elsevier

5) Seminars in dialysis -Wiley

6) Clinical Transplantation-Wiley

7) Transplant proceedings-Elsevier

8) New England Journal of Medicine –Massachusetts Medical Society

9) Journal of Indian Society of Nephrology-Medknow publications

10)Journal of Association of Physicians of India.-Japi Oaye press

11) Indian Journal of Transplantation.

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ANNEXURE

Blueprint for Theory and Practical Examination

Topic	Content Weightage	Type of assessment	No./Type of questions/Marks
Immunology and Immunogenetics of transplantation Including HLA testing	30%	Reasoning/Analytical questions	3 Long Essay questions
Transplant Pharmacology	20%	Reasoning/Analytical questions	2 Long Essay questions
Pre-transplant evaluation and management of the transplant candidates	10%	Reasoning/Analytical questions	1 Long Essay questions
Organ procurement, preservation and allocation of kidneys from deceased donors	10%	Reasoning/Analytical questions	1 Long Essay questions
Post-operative management of kidney transplant recipients and donors. Epidemiology of major causes of post-transplant morbidity and mortality. Management of EARLY & LATE post-transplant complications. Recent Advances	30%	Reasoning/Analytical questions	3 Long Essay questions
Total	100%		10 LEQs 100 Marks

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Model Question paper

Fellowship In Transplant Nephrology

Department of Nephrology

10 Long Essay Questions X 10= 100 marks Time: 3 Hours

1. Write in brief about HLA AND Renal Transplant
2. Write in brief about Cross match
3. Write in brief about Transplant tolerance
4. Write in detail about Tacrolimus – mechanism of action, dosage and side effects including monitoring of levels
5. Write about induction therapy in Renal Transplant
6. Importance of DTPA in Pre transplant evaluation
7. Define brain death and the steps involved in declaring
8. Mention in brief about most common infection in first 3 months of Renal Transplant
9. Write about diagnostic categories for renal allograft biopsy

   Mention types of allograft rejection and how do you treat acute rejection

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Portfolio template



YENEPOYA MEDICAL COLLEGE

A unit of Yenepoya (Deemed to be University)

University Road, Deralakatte, Mangaluru – 575018

Portfolio

Name of the Fellow :

Department :

University Registration No :

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STUDENT PROFILE

PHOTO

Name of the Department	
Name of the Student	
University Registration Number	
Batch	
Contact No	
Email I D	
Guardian/ Parent	
Name of the Guide	
Name of the Nodal faculty	
Name of the Head of the Department	

Clinical Posting at ----------

Department: **Postings from:** **to :**

Date	ACTIVITIES DONE FOR THE DAY – Observed (O), Assisted (A), Performed (P)	Signature of the health facility in

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Clinical Posting at----------

Department: **Postings from:** **to :**

Date	ACTIVITIES DONE FOR THE DAY – Observed (O), Assisted (A), Performed (P)	Signature of the health facility in

Reflections

Reflective Writing:

What happened?

So What?

Then What?

Seminars/Journal Club/Case Presentation

Sl. No	Topics	Date	Signature of the Teacher
1.			
2.			
3.			
4.			
5.			
6.			

EVALUATION OF PRESENTATIONS

Sl. No	Criteria for marks	Max. Marks 10
1	Topic discussion with the concerned staff before presentation	1
2	Gives adequate introduction	2
3	Quality of content	3
5	Quality of Presentation	2
6	Topic discussion (Q/A)	2

Grade	Marks
A	8-10
B	5-7
C	1-4

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CME/Conferences attended and Presentations

S. No.	Date	Type of activity	Venue & Event
1.			
2.			
3.			

Signature of Teacher

Checklists/Formats for assessment

Sample Checklist of Objective structured clinical examination (OSCE)

Fellowship In Transplant Nephrology

Department of Nephrology

Yenepoya Medical College

Yenepoya (Deemed to be University), Mangaluru-575018

OSCE Station - Give in detail report of Renal allograft biopsy

Item	**Marks**
Interpretation of glomeruli	2 Marks
Interpretation of Tubulointerstitium	2 Marks
Interpretation of Vessels	2 Marks
Reporting	4 Marks
Total	10 Marks