

Dow University of Health Sciences



RENAL MODULE

4 weeks

Third Year MBBS

5 YEAR CURRICULAR ORGANIZATION

Spiral	year	Modules				
First Spiral	I	FND1- Foundation Cell, Genetics & Cell Death (Basics of Anatomy, Physiology, Biochemistry, Gen. Pathology, Gen. Pharmacology, Community Medicine & Behavioral Sciences, 9 Weeks		HEM1- Blood Module Immunity, Inflammation, Tissue repair, Antimicrobials & Neoplasia 9Week		
		LCM1- Locomotion Bones, Joints, Nerves & Muscles, 9weeks		RSP1- Respiratory System 6 weeks	CVS1- Cardiovascular System 4 weeks	
	II	NEU1- Nervous System 8 weeks		HNN1- Head & Neck & Special 6 weeks	END1- Endocrinology 5weeks	
		GIL 1-GIT and Liver 8 weeks		EXC1- Renal and Excretory System 5 weeks	REP1- Reproductive System 5 weeks	
Second Spiral	III	IDD 1- Infectious diseases 5 weeks	HEM2- Hematology 5 weeks		RSP2- Respiratory System 5 weeks	CVS2- Cardiovascular System 5 weeks
		GIL 2-GIT and Liver (including Nutritional Disorders) 8weeks		EXC2- Renal & Excretory System 5 weeks	END2- Endocrinology 5 weeks	
	IV	ORT2- Orthopedics, Rheumatology, Trauma 7 weeks		REP2- Reproductive System 8 Weeks	PMR-Physical Medicine & Rehabilitation DPS-Dermatology Plastic Surgery / Burns GEN-Genetics 6 weeks	
		NEU2- Neurosciences and Psychiatry 8 weeks		OPH / ENT* 4 weeks		ENT/OPH * 4 weeks
Third Spiral	V	Clinical Rotation 9:30 to 3:00 (with Ambulatory, Emergency, Intensive care) In Medicine, Pediatrics, Cardiology and Neurology units <ul style="list-style-type: none"> ▪ Lecture on problem based approach, twice a week ▪ Ward tutorial twice a week ▪ Student research presentation once a week 		Clinical Rotation 9:30 to 3:00 (Inpatient, Ambulatory, Emergency, Intensive care and Operation Theatres) In Surgery, Gynecology & Obstetrics, Orthopedics and Neurosurgery. <ul style="list-style-type: none"> ▪ Lecture on problem based approach, twice a week ▪ Ward tutorial twice a week ▪ Student research presentation once a week 		

RATIONALE:

Renal disorders are commonly encountered in both adult and pediatric clinical practice. Acute and chronic glomerulonephritis, nephrotic and nephritic syndromes, acute and chronic renal failure, urinary tract infections, renal tumors, diseases related to lower urinary tract and prostate are some of the disorders a doctor will come across in clinical practice. In this second, clinical spiral module of renal diseases the student shall deal with the basic understanding of the anatomy, physiology and biochemical processes attained in the first spiral and develop the understanding of common renal diseases and renal failure and its management,.

TERMINAL OBJECTIVE:

By the end of the renal module, a medical student shall be able to:

- Recognize the clinical presentations of common renal diseases in the community.
- Diagnose common disorders on the basis of history, examination and clinical investigations.
- Describe the basic principles of management of common disease and make appropriate referral.
- Identify the specific diagnostic tools for renal disease, and their interpretation
- Apply preventive measures & prognosis for counseling the patients.

MODULE OBJECTIVES:

- Objectives of module are listed in following grid along with contents, modes of information transfer, duration of teaching of each content and the mode of assessment.
- Revisit structure and function of renal and excretory system.
- Identify Congenital anomalies and cysts of kidneys.
- Elicit relevant history and perform Clinical examination of urinary system, including per-rectal examination.
- Read and Interpret lab investigations and imaging techniques to reveal the diagnosis.
- Identify the causes, underlying pathophysiology, histopathology, clinical presentation and management of Urolithiasis and obstructive uropathies/ Renal colic.
- Identify the causes, underlying patho - physiology, histopathology, clinical presentation and management of Glomerular conditions: nephritic and nephrotic syndrome.
- Describe the causes, underlying patho-physiology, histopathology and clinical presentation of Tubular and interstitial disorders.
- Identify the causes, underlying pathophysiology, histopathology, clinical presentation and management of acute and chronic renal failure.
- Describe the causes, underlying patho-physiology, histopathology, clinical presentation and management of Infectious disorders.
- Identify the causes, underlying pathophysiology, histopathology, clinical presentation and management of renal tumors.
- Revisit fluid, electrolyte and acid base balance.

- Describe medico legal aspects of virginity, Pregnancy, Delivery and apply knowledge in clinical scenarios.
- Define and classify natural and unnatural sexual offences. Describe steps of examination of victim of sexual assault.

MODULE CONTENTS:

PHARMACOLOGY

- EXC 2 Pha 1:** Diuretics 1
EXC 2 Pha 2: Diuretics-2

PATHOLOGY

- EXC 2 Pth 1:** Obstructive Uropathy 1 Urinary out flow Obstruction (Urolithiasis, Hydronephrosis)
EXC 2 Pth 2: Cysts : Congenital and acquired cystic conditions of kidney
EXC 2 Pth 3: Tumors of renal system
EXC 2 Pth 4: Obstructive Uropathy 2 Urinary out flow Obstruction (Prostate)
EXC 2 Pth 5: Pathogenesis of Glomerular Disease
EXC 2 Pth 6: Glomerular conditions: nephritic Syndrome
EXC 2 Pth 7: Glomerular conditions: nephrotic syndrome
EXC 2 Pth 8: Tubular Interstitial diseases
EXC 2 Pth 9: Pyelonephritis
EXC 2 Pth 10: Urinary Tract Infections
EXC 2 Pth 11: Urine C/S (TUTO)
EXC 2 Pth 12: Urinary Analysis, Proteinuria (TUTO)

FORENSIC MEDICINE

- EXC 2 For 1:** Virginity and it Medicolegal Aspects
EXC 2 For 2: Drug addiction, drug dependence (TUTO)
EXC 2 For 3: Pregnancy / Delivery
EXC 2 For 4: Hydrocarbons Petroleum Distillates (TUTO)
EXC 2 For 5: Sexual offences
EXC 2 For 6: Unnatural sexual offences
EXC 2 For 7: Abortion
EXC 2 For 8: Opium and its derivative
EXC 2 For 9: Infanticide

COMMUNITY MEDICINE

- EXC 2 Com 1:** Hospital waste management
EXC 2 Com 2: Data analysis measure of central tendency
EXC 2 Com 3: T TEST APPLICATION

PAEDIATRICS

- EXC 2 Ped 1:** Clinical presentation and management of glomerular conditions: nephritic and nephrotic syndrome

ANATOMY

EXC 2 Ana 1: Functional Anatomy (Development, histology, Variations, Gross of renal system)

MEDICINE (NEPHRO)

EXC 2 Med 1: Investigation of renal & urinary diseases Interpret renal disorders on the basis of clinical presentations

EXC 2 Med 2: Clinical presentation and management of Glomerular conditions: nephritic and nephrotic syndrome

EXC 2 Med 3: Acute Renal Failure

EXC 2 Med 4: Chronic Renal failure Overview renal dialysis and renal transplants

EXC 2 Med 5: Clinical presentation, types and management of UTI

EXC 2 Med 6: Na (SODIUM) Disorders

EXC 2 Med 7: Management of acid base balance disorders

SURGERY

EXC 2 Sur 1: Clinical approach and Management of hematuria

EXC 2 Sur 2: Clinical approach and Management of urolithiasis

EXC 2 Sur 3: Clinical approach management of renal tumors and urinary bladder tumor (benign & malignant)

EXC 2 Sur 4: Clinical approach & management of renal tumors and urinary bladder tumor (benign & malignant)

EXC 2 Sur 5: Clinical approach & management of renal tumors and urinary bladder tumor (benign & malignant)

PHYSIOLOGY

EXC 2 Phy 1: GFR and its regulation and its applied physiology.

RADIOLOGY

EXC 2 Rad 1: (IVP/ US/ Renal CT Pyelography, Radio nuclear scan /renal arteriography)

BEHAVIORAL SCIENCES

EXC 2 BS 1: Ethical aspects of organ/kidney transplant

SKILL LAB

EXC 2 SL 1: Male and Female Catheterization

TEACHING STRATEGIES

LARGE CLASS FORMATS

- Lectures

SMALL GROUP DISCUSSION

- Demonstrations
- Tutorial
- Practical

- Skill labs
- Case based learning sessions

LEARNING OBJECTIVES OF SKILL LAB

LEARNING OBJECTIVES:

After the session students should be able to:

- ☑ List the equipment required for the procedure.
- ☑ Demonstrate correct aseptic techniques and the procedure for urinary catheterization.

ASSESSMENT PLAN

RENAL MODULE

	WEIGHTAGE
ANNUAL EXAM	80%
MODULE EXAM INTERNAL EVALUATION	
THEORY	10%
PRACTICAL	10%

CONTACT HOURS (DISCIPLINE WISE)

Discipline	Contact Hours
Pathology	13
Surgery	5
Pharmacology	2
Forensic Medicine	10
Community Medicine	3
Medicine	7
Paediatrics	1
Skill Lab	1.5
Radiology	1
Behavioural science	1
Physiology	1
Anatomy	1

CREDIT HOURS	
THIRD YEAR RENAL & EXCRETORY 2 MODULE	
RENAL 2	4.5

BOOKS

PATHOLOGY

- Robbins Basic Pathology Kumar & Abbas 9th Edition
- Robbins & Cotran Pathologic Basis Of Disease Kumar & Abbas & Aster 9th Edition

COMMUNITY MEDICINE

- Public Health And Community Medicine Shah, Ilyas, Ansari 7th Edition

PHARMACOLOGY

- Lippincott's Illustrated Review Pharmacology Karen Whalen 6th Or Latest Edition
- Basic And Clinical Pharmacology Bertram G. Katzung 11th Edition

FORENSIC MEDICINE

- Principles And Practice Of Forensic Medicine Nasib R.Awan 1 St Edition

MEDICINE

- Principles & Practice Of Medicine Davidson's 22nd Or Latest Edition
- Essentials Of Kumar And Clark's Clinical Medicine Kumar & Clark 9th Or Latest Edition
- Macleod's Clinical Examination Douglas & Nicol & Robertson 13th Or Latest Edition
- Hutchison's Clinical Methods William M Drake & Michael Glynn 23rd Or Latest Edition

PAEDIATRICS

Nelsons's Essentials Of Pediatrics Marcdante & Kliegman 7th Or Latest Edition

SURGERY:

- SHORT PRACTICE OF SURGERY ROBERT JOHN MCNEILL LOVE, HENRY HAMILTON BAILEY 26TH EDITION or Latest Edition Current Diagnosis and Treatment Surgery GERARD M.DOHERTY 14th or Latest Edition
- BROWSE'S INTRODUCTION TO THE SYMPTOMS & SIGNS OF SURGICAL DISEASE NORMAN L BROWSE 5 th or Latest Edition

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