

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

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SYLLABUS & GUIDELINES FOR

(Post Doctoral Fellowship under Allied Health Science)

POST DOCTORAL FELLOWSHIP IN PAEDIATRIC PATHOLOGY

ACADEMIC YEAR 2024 – 2025 SESSION ONWARDS

SYLLABUS FOR PAEDIATRIC PATHOLOGY

A. GENERAL PATHOLOGY

I. GENETIC DISORDER

Genes and Human Diseases-Mendelian Disorders- Complex multigenic Disorders- Chromosomal Disorders- Single-Gene disorder with Non classic inheritance- Molecular genetic Diagnosis

II. DISEASE OF THE IMMUNE SYSTEM

Normal immune response- Hypersensitivity; Immunologically mediated Tissue injury- Immunodeficiency Diseases- Autoimmune Diseases- Rejection of tissue transplants– Transplant pathology-Amyloidosis

III. NEOPLASIA

Epidemiology of Cancer- Molecular Basis of cancer-Carcinogenic agents- Clinical aspects of Neoplasia

IV. ENVIRONMENTAL AND NUTRITIONAL DISEASES

Dietary insufficiencies- Severe acute malnutrition - Vitamin deficiencies- Obesity

V. PAEDIATRIC AUTOPSY

VI. PEDIATRIC FORENSIC PATHOLOGY

B. SYSTEMIC PATHOLOGY

I. PLACENTA

Multiple pregnancies-Gestational Trophoblastic diseases- Congenital infections- Amniotic fluid infection / Chorioamnionitis- Fetomaternal haemorrhage-Fetal haemorrhage- Umbilical cord occlusion

II. NERVOUS SYSTEM

ICT/ Hydrocephalous –SIDS- Structural malformations of CNS- Metabolic and Neurodegenerative disorders-Neoplasms of CNS- Infections of CNS

III. PAEDIATRIC OPHTHALMIC PATHOLOGY

1. Eye lid – Inflammatory diseases, Neoplastic lesions
2. Conjunctiva – inflammatory diseases, melanotic abnormalities
3. Cornea – Inflammation – Degeneration
4. Lens – Developmental abnormalities – congenital lens opacities
5. Tumours of eye
6. Orbit & optic nerve – tumours, inflammatory lesions.

IV. RESPIRATORY TRACT

Developmental Defects- Tracheo-bronchial lesions - Lung – agenesis / Hypoplasia – Sequestration – Emphysema- Congenital pulmonary airway malformation-Hyaline Membrane Disease- Brocho-pulmonary Dysplasia- Pneumonia, broncho pneumonia- Lung tumors- Anomalies associated with diaphragmatic hernia

V. CVS

Congenital malformations– cardiomyopathies – myocarditis – acquired heart disease – vascular diseases including vasculitis – Tumors of heart and blood vessels

VI. GIT

1. OESOPHAGUS – congenital anomalies – Acquired diseases – GERD, Barrett's oesophagus
2. STOMACH– Congenital anomalies - Acquired diseases – Inflammatory Disorders – Tumors
3. SMALL AND LARGE INTESTINE – congenital anomalies – Cystic fibrosis - Hirschsprung Disaeses – Chronic intestinal pseudo obstruction – Tumors
4. GASTROINTESTINAL INFECTION AND INFLAMMATION – NEC
5. Malabsorption Disorders

VII. LIVER / GALL BLADDER / HEPATO BILIARY SYSTEM

Congenital anomalies – Jaundice- cholestatic disorder – Cystic lesion of liver – congenital hepatic fibrosis- Metabolic disorders- steatosis and steatohepatitis- autoimmune hepatitis – viral hepatitis- Abscess – vascular disorders -cirrhosis - Tumors of liver

VIII. PANCREAS

Congenital anomalies – cystic disease – Disorder and disease of exocrine and Endocrine pancreas – Diabetes Mellitus – pancreatitis in childhood – Tumors of Endocrine and Exocrine pancreas – Malformation syndromes.

IX. KIDNEY

Congenital malformation – hydronephrosis – Renal dysplasia / cystic diseases – glomerular diseases – Tubulointerstitial diseases – Reno vascular diseases – Renal neoplasms.

X. DISEASE OF URETER, BLADDER AND URETHRA

Cystitis – Tumours of bladder and urethra.

XI. FEMALE REPRODUCTIVE SYSTEM:

Structural abnormalities – Disorders of sex development – infections – Tumours

XII. MALE GENITAL TRACT: Structural abnormalities – Disorder of sex development – Tumours.

XIII. BREAST – Congenital anomalies – Fibrocystic disease – papillary duct hyperplasia – gynaecomastia – Tumours.

XIV. ENDOCRINOLOGY

Hormonal disorders and tumours- developmental disorders – tumours of endocrine glands – neuroblastoma – Congenital adrenal hyperplasia.

XV. LYMPHNODES , SPLEEN, THYMUS,-

Lymphadenopathy and lymphomas - reactive lesions of lymphnode - congenital anomalies of spleen.

XVI. BONE MARROW

Hematopoiesis – hematopoietic diseases – Aplastic anemia – leukemias – MDS

XVII. SOFT TISSUES

Benign and malignant tumors - congenital vascular anomalies – vascular tumours – fibroblastic, Myofibroblastic and pericytic tumours – neural and Nerve sheath tumors – skeletal and smoothmuscle tumours – Small, round blue cell tumors.

XVIII. SKIN

Vesiculobullous diseases – non-infectious papillo squamous dermatosis – infectious diseases– granulomatous dermatosis – panniculitis – vasculitis – folliculitis – systemic disease with skin manifestations – neoplasm and hamartomas- melanotic lesions.

XIX. NEUROMUSCULAR SYSTEM

Muscle Biopsy – Histopathology in muscular diseases – spinal cord diseases – Neuropathies – Myopathies– Muscular dystrophies.

XX. SKELETAL SYSTEM

Syndromes associated with skeletal defects -congenital skeletal diseases– acquired skeletal disorders – Tumors of bone.

XXI. HEMATOLOGY

DISORDERS OF WBC – Reactive proliferation of WBC and Lymphnodes – Lymphoid neoplasms– Myeloid neoplasms – Histiocytic neoplasms

DISORDERS OF RBC – Anemia – polycythemia— Hemoglobinopathies.

PLATELETS – bleeding disorders – platelet disorders

COAGULATION DISORDERS

ROTATIONAL SPECIALITY POSTINGS:

5 months in Paediatric Pathology

2 months in Paediatric Hematology

2 months in Molecular Pathology

1 month in Perinatal Pathology

30 days in Neonatology

30 days in Blood Bank.
