Drugs in Endocrine Diseases

Duration: 4 weeks (20 days)

Topic/ Concept	Objectives	Time (h) lecture	T/L activity	Dept.	Comments
	Student should be able to,				
3/SBM-05/1 **ECF volume** **i) Volume regulation in oedematous conditions**	1. Correlate clinical conditions leading to formation of oedema, in relation to: a. Abnormal leakage of fluid from the capillaries b. Failure in return of fluid from capillaries 2. Describe the effects of adding solutions, in different tonicity, to the ECF 3. Describe the mechanisms involved in controlling ECF **(**Dehydration and Loss of blood or plasma **)** 4. Recall the compensatory mechanism in hypovolaemic shock 5. Describe the effects of hypovolaemic shock and grade hypovolaemic shock in relation to body responses	1	Lecture	Medicine	Prof. UI agreed this lecture should be done by Medicine Department
3/SBM-05/2 **Electrolyte imbalance**	1. Recall the mechanisms involved in the transport of electrolytes in- between the fluid compartments. 2. Correlate Potassium, Sodium and Calcium 3. homeostasis in relation to clinical problems	1	Lecture	Anaesthesia	Department of Anaesthesialogy will do this lecture for medicine
3/SBM-05/3 **Acidosis and alkalosis**	1. Recall the principles of Acid base balance 2. Relate metabolic derangements with acid base disorders 3. Describe how compensatory mechanisms function in these disorders	1	Lecture	Anaesthesia	
3/SBM-05/4 **Measurement of pCO2, pH, Std HCO3, base deficit**	1. Recall acid base disorders with biochemical parameters 2. Interpret arterial blood gas analysis results in relation to acid base disorders 3. Explain the anion gap and its clinical importance	1	Lecture	Anaesthesia	Will be doing after revising the objectives
3/SBM-05/5 **Types and basis of clinical uses of diuretics**	1. Classify diuretics on the basis of mechanism of action and efficacy 2. Describe the mechanism of action, pharmacokinetics, adverse effects and clinical uses of diuretics	1	Lecture	Pharmacology	

3/SBM-05/6 **Control of body temperature and actions of antipyretics**	1. Recall the mechanisms involved in the pathogenesis of fever 2. List the drugs used as antipyretics 3. Describe the mechanism of action, **4.** pharmacokinetics and adverse effects of antipyretic drugs	1	Lecture	Pharmacology	
3/SBM-05/7 **Enzymatic defects and receptor abnormalities Incl. signal transduction related to endocrine diseases**	1. Recall the role of receptors and signal transduction in endocrine function 2. Describe how hormone resistance develops 3. Describe how abnormalities in receptors and signal transduction result in endocrine disorders 4. Describe how enzyme defects result in endocrine disorders	1	Lecture	Biochemistry	
3/SBM-05/8 **Thyroxine and antithyroid drugs**	1. Recall the steps in the synthesis and secretion of thyroid hormones 2. Recall the physiological effects of thyroid hormones 3. Describe the pharmacokinetics of thyroxine 4. Explain the principles underlying replacement therapy and suppressive therapy with thyroxine 5. Describe the mechanism of action, pharmacokinetics and adverse effects of antithyroid drugs	1	Lecture	Pharmacology	
3/SBM-05/9 **Antidiabetic drugs**	1. Recall the mechanism of insulin secretion and its regulation **b**. List the classes of antidiabetic drugs **c.** Describe the mechanism of action, pharmacokinetics, adverse effects of antidiabetic drugs 2. List the different types / formulations of insulins and state their duration of action 3. Describe the principles underlying the manufacture and storage of insulins 4. Explain the principles underlying the use of antidiabetic drugs during acute metabolic complications such as ketoacidosis, pregnancy, severe illness and surgery	1+1+2 (4h)	2-hr sessions & 2hrs for tutorial	Pharmacology	

3/SBM-05/10 **Glucocorticoid and Mineralocorticoid drugs**	1. Recall the physiological effects of adrenocortical steroids 2. Describe the anti-inflammatory and immunosuppressive effects of glucocorticoids 3. Compare the relative potency, glucocorticoid / mineralocorticod activity and duration of action of commonly available steroid drugs 4. List the clinical uses and adverse effects of glucocorticoid drugs 5. Explain the principles underlying replacement therapy in adrenocortical insufficiency 6. Describe the precautions that can be taken to minimize the adverse effects of long-term steroid therapy	1	Lecture	Pharmacology	

Pharmacology - I (Year 3 – Semester 1)
Module Summary

	Lectures (hrs)	**PD (hrs)**	**Staff Seminar (hrs)**	**Museum class (hrs)**	**Tutorial (hrs)**	**Total (hrs)**
Pharmacology	20		2		2	22
Medicine	1					3
Radiology						
Pathology						
Anaesthesia	5					5
Biochemistry	1					1
Total	**27**		**2**		**2**	**31**

Names and the departments of the teachers involved in the teaching programme

Dept. of Biochemistry
Prof. R. Sivakanesan

Dept. of Pharmacology
Dr U Dangahadeniya

Dept. of Medicine
Prof. N. Senanayake
Dr. C. Jayasinghe
Dr. I.B. Gawarammana
Dr T Jayalath
Dr A Medagama

Dept. of Anaesthesiology
Prof. C.D.A. Goonasekera
Dr. V Pinto

Radiology
Dr. B. Hewavithana

Dept. of Paediatrics
Prof. C.K. Abeysekera
Dr R Mudiyanse

NMU
Dr. L. Watawana
Dr D K K Nanayakkara

Examination Format - Year 3 Semester 1

Module	Credits	MCQ	Essay	Viva
Pharmacology ï I	2.0	1 hr 20 MCQ (Covering drug treatment in Respiratory, Cardiovascular, Musculo Skeletal and Endorine diseases)	1 hr 2 Essays (Two systems alternating each year)	-