

Foundation in Pharmacology - 2 (Year 3 Semester 1)

Credits: 0.5 – Foundation in Pharmacology - 2
(Credits: 2.0 – Foundation in Pharmacology – 1)

Duration: 3 weeks (15 days)

Topic & Concepts	Objectives	Time	Dept.	T/L activity	Comments
	At the end of the learning session the student should be able:				
3/SBM-1/8					
Awareness of commonly prescribed drugs and their effects in a tertiary care hospital					
a. Learning clinical pharmacology in a Hospital setting	1. recall the generic names of at least 10 commonly prescribed drugs in the following wards (a) general medical (b) general surgical (c) Gyn. & Obs. (d) Paediatrics				
	2. classify each drug in objective-1 under the dosage form: (a) tablet (b) capsule (c) dermal patches (e) suppository (f) creams/ointments (g) respiratory fluid (h) aerosol (I) powder (j) injections (k) Syrups				
	3. state the route/s of administration of each dosage form listed in objective -2 under the following modes: (a) oral (b) intravenous (c) intramuscular (d) subcutaneous (e) per-rectal (f) intravaginal (g) inhalation (h) sublingual (i) topical				
	4. recall the abbreviations relevant in prescribing drugs, and use this knowledge in collecting information relevant to objective-5.1				
	5. obtain information on dosage regimens (from the BHT/Drug card), with respect to drug/s listed in objective-1 and write (a)dosage (b) route (c) times and frequency of administration (d) duration of medication				
	6. identify and record the following aspects of the drugs listed in objective-1 prior to administration, (a) active ingredient (b) physical appearance (c) expiry date (d) notes on storage				
	7. name the drugs requiring storage in the (a) cold (b) away from sunlight and observe and note how heat-labile drugs are stored correctly in the refrigerator noting the different locations assigned to different drugs.				
			Pharmacology	Hospital based assignment	Students are expected to carry out this assignment during their clinical training. Specific objectives are given to the individual student. Students will be assessed in 6th end semester exam.
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	8.1 list 3 intravenous fluids commonly used in a medical/surgical unit				individual student. Students will be assessed in 6th end semester exam.
	8.2 list the constituents in each of the above mentioned intravenous fluids				
	8.3 list 2 common indications for use of intravenous fluids mentioned in 5.8.1				
	9. name the drugs requiring reconstitution prior to administration, observe and make notes on the reconstitution procedure by observing the ward Nurse/Pharmacist.				
	10. state the (a) clinical methods and (b) laboratory methods, where applicable, used to monitor the effectiveness of the drugs listed in objective-1				
	11. name the drugs that would have caused an untoward reaction/adverse effect by obtaining information from the BHT and from the doctor.				
	12. list the drugs that are administered in clinical emergencies and make notes under (a) name of drug (b) the emergency (c) dosage form (d) dosage regimen (e) route of administration (f) method/s of monitoring clinical improvement of the emergency.				
b. Drug delivery systems: Formulations, devices	1. identify the different drug delivery systems used in clinical practice		Pharmacology	Covered under pharmacokinetics in Foundation 1	Use the skills lab
	2 state the advantages and disadvantages of each drug delivery system				
2007-3/SBM-1/9					
Drug Information	1. identify different sources of drug information		Pharmacology/Medicine		
	2. differentiate unbiased information from promotional material.				
a. Sources, Reliability and Interpretation	3. critically analyse the information in a given source of drug information				
	4. carry out a literature search on drug information				
2007-3/SBM-1/10					
a. Drug Discovery and Development	1. state the history of drug discovery		Pharmacology/Forensic Medicine		
	2. list the sources from which new drugs are developed				
	3. describe the different stages of the development of a new drug				

b. Drug Regulation	1. explain the components of the (i) Drug Policy (ii) Cosmetic Devices and Drugs Act of Sri Lanka		Pharmacology/ Forensic Medicine		Will be linked to DIS. Visit to Drug Regulation Authority
2007-3/SBM-1/11					
Antimicrobial Agents					
	1. define an "antimicrobial agent"	9h	Pharmacology	Lecture/ Tutorial	
	2. explain the basis of using antimicrobial agents in human infection				
	3. classify antimicrobial agents based on their chemical structure/mechanism of action with examples under following headings.				
	(I). Antibacterial agents				
	(ii). Antifungal agents				
	(iii). Antiviral agents				
	(iv). Antiprotozoal agents				
	(v). Antihelminthics				
	4. describe mechanism of action, pharmacokinetics, clinical uses, adverse effects, interactions and limitations for the use of				
	(I). antibacterial agents				
	a. Penicillins				
	(Benzylpenicillin, Phenoxymethylpenicillin, Penicillinase-resistant penicillins, Broad-spectrum penicillins, Antipseudomonal penicillins, Mecillinams, Depot penicillins, newer penicillins)				
	b. Cephalosporins, Cephameycins and other beta lactams				
	c. Tetracyclines				
	d. Aminoglycosides				
	e. Macrolides				
	f. Clindamycin				
	g. Chloramphenicol, Fusidic acid, Vancomycin				
	h. Sulphonamides and trimethoprim				
	I. Antituberculous drugs				
	j. Antileprotic drugs				
	k. Metronidazole and tinidazole				

	I. Quinolones	Pharmacology	Lecture/ Tutorial	
	m. Antimicrobials used in lower urinary-tract infections			
	(ii). antifungal agents and principles of Antifungal Therapy			
	a. Amphotericin, Azoles, Griseofulvin, Nistatin			
	(iii). antiviral agents and principles of antiviral therapy			
	a. drugs in HIV Infection (Nucleoside reverse transcriptase inhibitors eg: Zidovudine; Protease inhibitors eg: indinavir, amprenavir)			
	b. drugs in herpesvirus infection (Aciclovir, Valaciclovir, Famciclovir)			
	c. drugs in viral hepatitis			
	(iv). antiprotozoal agents			
	a. Antimalarials			
	b. Amoebicides			
	c. Trichomonacides			
	d. Antigiardial drugs			
	e. Leishmaniacides			
	f. Trypanocides			
	g. Drugs for toxoplasmosis			
	h. Drugs for pneumocystis pneumonia			
	(v). antihelminthics			
	a. Drugs for threadworms			
	b. Ascaricides			
	c. Drugs for tapeworm infections			
	d. Drugs for hookworms			
	e. Schistosomicides			
	f. Filaricides			
	g. Drugs for cutaneous larva migrans			
	h. Drugs for strongyloidiasis			
	5.define chemoprophylaxis and explain the basis of chemoprophylaxis of infections			
	(I). describe the drug therapy of			
	a. acute attack of malaria in endemic and non-endemic areas (including chloroquine-resistant malaria)			
	b. severe complicated malaria			
	c. malaria in pregnancy			
	d. malaria in G6PD deficiency			
	e. chemoprophylaxis of malaria			

	(ii). acute pyogenic meningitis				
	(iii). acute respiratory tract infections				
	(iv). urinary tract infections				
	(v). tuberculosis				

Foundation in Pharmacology - 1 (End of Year 2 Semester 2) & Foundation in Pharmacology – 2 (Year 3 Semester 1)
Module Summary

Department	Lectures (hrs)	SGD (hrs)	Tutorials (hrs)	Total (hrs)
Pharmacology Biochemistry	20	6	20	46
Total	20	6	20	46

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

Dept. of Pharmacology

Dr. U. Dangahadeniya

Dept. of Biochemistry

Prof. R. Sivakanesan