

Foundation in Pathology - Year 2 Semester II 2016/17 Batch

Final Document revised on 05th September, 2019

Web Copy

Topic & Concepts	Objectives	Time	Department	T/L activity
	At the end of the module, the student should be able,			
2016-SBM/MED2213/01				
Introduction to Pathology	1. to understand the purpose of the module and the basis for the design of the module	1h	Pathology	Introductory session - Lecture
2016-SBM/MED2213/02				
Acute inflammation and Suppuration	1. to define the process of acute inflammation and discuss its uses 2. to describe in detail* the various steps, controlling factors (cells and chemical mediators), sequelae, complications and clinicopathological effects of acute inflammation. (includes suppuration)	5h	Pathology	3h Lecture + 2 SGL (inflammation in general)
2016-SBM/MED2213/03				
Chronic inflammation	1. to define the process of chronic inflammation 2. to describe in detail* the non-specific and specific types of chronic inflammation, its sequelae and complications	2h	Pathology	2h Lecture + SGL (inflammation in general)
2016-SBM/MED2213/04				
Applications of Chronic inflammation	1. to outline the pathogenesis of tuberculosis, leprosy and atherosclerosis using the concept of chronic inflammation.	1h	Pathology	1h Lecture
2016-SBM/MED2213/05				
Wound healing	1. to describe the process of healing in injured tissue and its complications 2. define the terms, resolution, regeneration and organization 3. to describe the process of organization 4. to describe the healing processes in different types of tissue including skin wounds	3h	Pathology	2h Lecture + 1h SGL
2016-SBM/MED2213/06				
Cell injury and death	1. to outline the injurious agents to cells and describe the mechanisms of cell injury. 2. to outline the different cell response to injury 3. to outline the non reversible types of cell injury. 4. to describe the morphological changes that occur in necrosis 5. to describe the pathogenesis and pathology of different types of necrosis	5h	Pathology	3h Lecture + 2h SGL



*Chairperson
Curriculum Coordinating Committee
Faculty of Medicine
University of Peradeniya 1*

	<ol style="list-style-type: none"> 6. to describe the clinical manifestations of necrosis and the methods of diagnosing. 7. to define the term apoptosis and describe the mechanism of apoptosis 8. to discuss the importance of apoptosis in physiology and the clinical significance of defective apoptosis. 9. to differentiate apoptosis from necrosis 10. to define the term reperfusion injury and describe the process 			
2016-SBM/MED2213/07				
Ischaemia and infarction	<ol style="list-style-type: none"> 1. to define the terms; hypoxia, Ischemia and infraction 2. to describe the aetiopathogenesis of ischemia and infraction in different tissues. 3. to describe the pathological changes in infarctions in different tissues 4. to outline the clinical manifestations of infarctions 5. to outline the healing process of infarction in different tissues 	1h	Pathology	1h Lecture (2h SGL for cell death and infarction)
2016-SBM/MED2213/08				
Cellular Adaptations and disorders of growth	<ol style="list-style-type: none"> 1. to describe with examples manners in which cell adapt to changed micro-environment 2. describe aetiopathogenesis and outcomes of dysplasia giving examples. 	1h	Pathology	1h lecture
2016-SBM/MED2213/09				
Cellular accumulation pathologic calcification and Amyloidosis	<ol style="list-style-type: none"> 1. to describe the process of pathological calcification and to state clinical examples. 2. to outline the types of abnormal pigments and accumulations in cells and their pathogenesis and clinical importance. 	1h	Pathology	1h Lecture
2016-SBM/MED2213/10				
Congestion and oedema	<ol style="list-style-type: none"> 1. to define the term oedema and outline 2. describe the mechanisms of oedema 3. describe the effect of rennin angiotensin aldosterone system on oedema 4. outline the causes of localized and generalized oedema and the different clinical manifestations. 5. to list the processes that injure lymphatics and the clinicopathological outcome due to injured lymphatics. 6. to define the processes hyperaemia (active congestion) and congestion (passive congestion) 7. to describe the pathogenesis of these processes. 8. describe the aetiopathogenesis, morphological changes and clinical manifestations in acute and chronic venous congestion of liver and lung. 	4h	Pathology	2h Lecture + 2h SGL



2016-SBM/MED2213/11				
Thrombosis	<ol style="list-style-type: none"> 1. to define thrombosis and haemostasis 2. to list the main factors which predispose to thrombosis. 2. to describe the pathogenesis and sequelae of thrombosis in different types of blood vessels and the heart, and the fate of thrombi 3. to mention the clinicopathological features of thrombosis in the different types of blood vessels. 	3h	Pathology	2h Lecture + 1h SGL
2016-SBM/MED2213/12				
Embolism	<ol style="list-style-type: none"> 1. to define the process of embolism. 2. to describe the aetiopathogenesis of different types of emboli (thromboemboli, fat, bonemarrow, gas and amniotic fluid) and the outcomes and clinicopathological effects 	3h	Pathology	2h Lecture + 1h SGL
2016-SBM/MED2213/13				
Introduction to chemical pathology	<ol style="list-style-type: none"> 1. to introduce the terms and systems in place in laboratory medicine, chemical pathology in particular 	1h	Pathology	Lecture
2016-SBM/MED2213/14				
A) Introduction to Hematology B) Classification of anemia C) History taking and clinical examination of hematological disorders D) Interpretation of basic hematological tests	<ol style="list-style-type: none"> 1. to know the definition of anaemia and classification of anaemia according to the morphology and red cell indices 2. to describe the common clinical manifestations of anaemia 3. to identify the laboratory errors in the reports issued (problems in collection of the specimen (collection into the incorrect container, haemolized sample, delayed separation of plasma, exposure of the sample to sunlight, specimen collection from drip arm, etc. 4. list the tests included in a full blood count 5. list the commonly requested haematological investigations 6. state the physiological changes of haemoglobin value in neonate, infant, childhood, adult male & female & in pregnancy 7. state the changes in the red cell count (e.g. polycythaemia, anaemia) 8. describe the physiological changes of WBC/DC in a neonate, infant, child below 6 yrs, adult & pregnancy 9. describe the clinical significance and common causes of leucopenia, neutropenia, neutrophil leucocytosis, lymphocytosis (absolute and relative) 10. describe the clinical significance of platelet count and causes of abnormally high and low platelet counts 11. describe the clinical significance of erythrocyte sedimentation rate (ESR) and causes of high ESR 12. list the tests included in a coagulation profile i.e. bleeding time (BT), clotting time (CT), prothrombin time (PT), activated partial thromboplastin time (APTT) & platelet count 13. state the importance of reticulocyte count 	6h	Pathology	5h Lecture + 1h SGL



	14. list the basic laboratory tests necessary for investigation of hemolytic anaemia			
2016-SBM/MED2213/15				
Introduction to human immune response	1. to introduce to basic concepts of human immune response (the details will be done from Y3S1 onwards)	4h	Pathology	2h Lecture + 2h SGL
2016-SBM/MED2213/16				
Basics of body fluid analysis	<ol style="list-style-type: none"> 1. to know the commonly requested urine tests (urine sugar, urine albumin, urine deposit, urine full report, creatinine clearance, urine for specific gravity, 24 hour urinary protein excretion, creatinine clearance, urine for micro albuminuria) 2. state the advice given to the patients and importance of preparation of the patients for these investigations 3. describe the basic procedure for performing urine ward tests 4. describe the importance of abnormalities of urine deposit (different types of cells and casts) 5. describe how to relate the urine biochemical tests with the urine deposit and the causes for likely incompatibilities 6. describe the common special urine tests (urine for Bence Jones proteins, urine for hemosiderinuria, urinary protein electrophoresis) 7. describe the normal function and composition of CSF 8. describe the alteration in CSF in different clinical conditions 9. describe how to send CSF specimens to the laboratory for CSF analysis 10. outline the components of peritoneal/ plural fluid analysis 11. describe an acute phase response 12. outline the biochemical and serological markers of inflammation 13. outline the biochemical and hematological indicators of inflammation and discuss their relationship to acute phase response 	1h	Pathology	1h Lecture
2016-SBM/MED2213/17				
Disorders of lipid metabolism.	<ol style="list-style-type: none"> 1. to describe the biochemical basis of lipid metabolism 2. to describe the diseases associated with lipid metabolism 3. to outline the laboratory tests to identify lipid metabolism and their interpretation 	1h	Pathology	1h Lecture
2016-SBM/MED2213/18				
Introduction to neoplasia	<ol style="list-style-type: none"> 1. to define the term neoplasia and outline the differences between neoplasia and hyperplasia. 2. describe the properties of a malignant tumour 3. to compare and contrast benign and malignant tumours 4. to describe the concepts of dysplastic and premalignant lesions 	2h	Pathology	Lecture



2016-SBM/MED2213/19				
Disorders of water and electrolyte balance	<ol style="list-style-type: none"> 1. to describe the homeostasis of water and electrolytes 2. to describe the aetiopathogenesis of common disorders associated with water and electrolyte imbalance 	1h	Pathology	1h Lecture
2016-SBM/MED2213/20				
Spread of tumours and clinical aspects	<ol style="list-style-type: none"> 1. to describe the modes of spread of malignant tumours and the clinicopathological effects. 	2h	Pathology	1h Lecture
2016-SBM/MED2213/21				
Oncogenesis	<ol style="list-style-type: none"> 1. to describe the cell cycle and the genes controlling it. 2. to outline the genes involved in carcinogenesis and describe the mechanism by which the defects in these genes promote carcinogenesis. 3. to describe the process of carcinogenesis and tumour progression 4. to outline the common carcinogens 5. to describe the mechanisms by which carcinogenesis by chemicals, viruses and radiation. 	2h	Pathology	2h Lecture + 2 h SGL for neoplasia
2016-SBM/MED2213/22				
Host response to tumour	<ol style="list-style-type: none"> 1. to outline the host immune response to destroy tumour cells and limit their spread 2. to describe the pathogenesis and clinical outcomes of cachexia and paraneoplastic syndrome 	1h	Pathology	1h Lecture
2016-SBM/MED2213/23				
Methods of tumour diagnosis	<ol style="list-style-type: none"> 1. to outline the different methods available for tumour diagnosis 2. to outline the screening methods available for tumour detection 3. describe what are tumour markers and their uses. 4. to outline commonly used tumour markers 	2h	Pathology	Lecture
2016-SBM/MED2213/24				
Clinical biochemistry of inflammation, immunity and malignancy	<ol style="list-style-type: none"> 1. describe the biochemical basis of serological markers of inflammation 2. outline the biochemical basis of serological markers of immunodeficiency 3. describe the pathological basis of tumour markers and their use and limitations giving specific examples 		Pathology	
2016-SBM/MED2213/25				
General pathology applications				
Clinical correlations a) respiration b) heart and vessels c) GI tractus d) Liver	<ol style="list-style-type: none"> 1. to apply the general pathology processes to clinical scenarios 	5 h	Pathology	5h Clinical lecture demonstration/ case discussions



e) Renal				
SGD				
a. inflammation b. cell death and healing c. Thrombosis and Embolism d. Congestion and Oedema e. Neoplasia f. Hematology and chemical pathology	1. to apply the mentioned general pathological processes to clinical settings	6 h	Pathology	6h SGD
2016-SBM/MED2213/26				
Specimen collection for common laboratory tests	1. to outline the common errors in specimen collection and transportation for biochemical investigations and how to identify such errors		Pathology	
Museum Classes	1. to apply the general pathological processes to specific diseases using mounted specimens and clinical scenarios	9 h	Pathology	9h Guided SGL
Histology practical	1. identify the microscopic features of general pathological processes and correlate them with macroscopic specimens and clinical scenarios	8 h	Pathology	8h practical



