Cardiovascular Pathology

Duration: 03 Weeks (15 days)

Concepts	Objectives	Activity	Time	Department	Comments
3/SBM-3/01 Introduction to ischaemia, infarction, thrombosis ï stenosis / occlusion, embolism Atherosclerosis Reperfusion	Recall Objectives given in FCP			Pathology	Done in detail in FCP
3/SBM-3/02 **Atherosclerosis** • different patterns of atherosclerosis • the clinical significance of atherosclerosis • the epidemiology and risk factors of atherosclerosis • the pathogenesis of atherosclerosis • the macroscopic and microscopic appearances of the atheromatous plaques and fatty streaks	Pathology: recall , objectives given in FCP		1 Hr	Pathology	Pathology objectives are covered in FCP - to recall Correlation between clinical symptoms and pathology in organ system dysfunction E.g. brain, kidney heart, lower limbs
3/SBM-3/03 **Hypertension** **Pathophysiology and end organ effects of hypertension** vascular pathology associated with hypertension • macroscopic appearance of hyaline arteriosclerosis and hyperplastic arteriosclerosis **Hypertensive heart disease** To be able to describe pathogenesis, and macrosopic appearance of heart in systemic hypertension pulmonary hypertension • Imaging in HT	outline the aetiology of hypertension describe the pathophysiology of hypertension. describe the pathological changes in large and small arteries in benign and malignant hypertension. outline the end organ effects due to hypertensive vascular changers eg. heart, kidney, brain. describe the pathological basis of the clinical symptoms due to involvement of these organs explain the role of imaging in hypertension.	Lecture Lecture	4Hrs	Pathology (2hr) Radiology(1hr)	

Nuclear Medicine imaging in cardiovascular disease	*To provide the student with a understanding of organ physiology and its functions with regards to radioisotope uptake in health and disease by:* *a. myocardium* *b. renovascular system* correlate the radio isotope uptake with organ function in health and disease with respect to a myocardium b renovascular system	Lecture		Nuclear Medicine (1hour)	
3/SBM-3/04 **Metabolic Syndrome and Diabetic vascular disease**	1 describe the pathological changes in the vascular system in diabetic patients. 2 describe the clinical significance of theses changes. 1 Define metabolic syndrome 2 state other names given to metabolic syndrome 3 list the risk factors in metabolic syndrome 4 list the other conditions associated with metabolic syndrome 5 state the diagnostic criteria for metabolic syndrome 6 state the principles of management and prevention of metabolic syndrome	Lecture	1hour	Pathology (SGLA) Medicine (1hr)	To be included
3/SBM-3/05 **Vasculitides and Raynauds disease** • pathogenesis of non-infectious vasculitidis • the pathogenesis, macroscopic appearance of affected blood vessels in giant cell arteritis, Takayasu arteriris, polyarteritis nodosa, Kawasaki syndrome, polyangitis, Wegeners granulomatosis, thromboangitis obliterance and Raynauds disease	1 describe the pathogenesis of non-infectious vasculitis 2 describe the pathological changes in vasculitis and describe the clinical outcomes due to these changes. 3 outline the main pathological changes and clinical outcomes in the vasculitic diseases named here	Lecture	1 Hr	Pathology	
3/SBM-3/06 **Aneurysms**	1 define the lesion aneurysm	Lecture	1 Hr	Pathology	

• define and classify aneurysms • list the causes of aneurysm • pathogenesis and macroscopic appearance and clinical course of abdominal aortic aneurysms • pathogenesis and macroscopic appearnce of syphilitic aneurysms aortic dissection	2 describe the pathogenesis of aneurysms. 3describe different morphological types of aneurysms. 4 describe the possible clinical outcomes and complications of aneurysms and describe their pathological basis. 5 describe pathogenesis, morphology, clinical outcome and complications of aortic dissection.				
3/SBM-3/07 **Diseases of veins and lymphatics** • the pathogenesis of thrombophlebitis and phlebothrombosis • pathogenesis and effects of lymphangitis and lymphodema	1 describe the pathogenesis and clinical outcomes of thromboangitis and phlebothrombosis. 2 describe the pathogenesis and effects of lymphangitis and lymphoedema (recall, objectives given in FCP)	Lecture	1h	Pathology	
3/SBM-3/08 **Ischaemic heart disease** • epidemiology, pathogenesis of IHD • role of fixed coronary obstructions, acute plaque change, coronary thrombus and vasoconstriction in coronary heart disease • pathogenesis of different types of angina • pathogenesis and macroscopic and microscopic appearance of different types of myocardial infarction • myocardial response to coronary arterial obstruction • the evolution of morphologic changes in myocardial infarction • consequences and complications of myocardial infarction • macroscopical changes of chronic ischaemic heart disease	1 outline the epidemiology of IHD 2 describe the pathogenesis of IHD 3 describe the role of fixed coronary obstructions, acute plaque change, coronary thrombus and vasoconstriction in coronary heart disease 4 describe the myocardial response to coronary arterial obstruction 5 name different types of angina and describe the pathological basis of them 6 describe the pathogenesis and morphogical changes in different types of myocardial infarctions. 7 describe the evolution of morphologic changes in myocardial infarction 8 describe the consequences and complications of myocardial infarction 9 describe the basis and clinical significance of reperfusion injuries. 10 describe the pathological changes in chronic IHD and the clinical outcomes.	Lecture	2Hrs	Pathology (2hr)	

	1 Define ischaemic heart disease 2 List the risk factors for ischaemic heart disease 3 List the types of ischaemic heart disease 4 describe the clinical manifestations of ischaemic heart disease 5 list the investigations in IHD 6 describe the electrophysiological changes in IHD 7 list the types of acute coronary syndrome 9 list the complications of acute coronary syndrome	Lecture	1 hr	Medicine (1hour)	
3/SBM-3/09 **Valvular heart disease** • valvular abnormalities caused by congenital and aquired conditions • pathogenesis and macroscopic appearance of the valves that has calcified (calcific Aortic stenosis) and in myxomatous degeneration (MVP) • pathogenesis, macroscopic microscopic appearances and effects of acute and chronic rheumatic heart disease • pathogenesis, macroscopic microscopic appearances and effects of infective endocarditis • conditions with non infective endocarditis (NBTE, Endocarditis of SLE	1. describe the pathogenesis of rheumatic fever and itôs implications for diagnosis and management 2. state the risk factors for infective endocarditis 3. describe the pathogenesis of infective endocarditis 4. list the important pathogens and the factors which contribute to these organisms causing infective endocarditis 5. discuss how the pathogenesis of infective endocarditis contributes to the symptoms and signs of the disease and in selection of diagnostic tests. 1 outline the causes of valvular heart disease 2 describe common congenital cardiac valvular abnormalities 3 describe the pathogenesis and morphological changes in calcified valves (e.g. calcific Aortic stenosis) and myxomatous degeneration (MVP) 4 describe the pathogenesis of rheumatic heart disease	Lecture	2Hrs	Pathology	

	5 describe the clinical outcomes and complications of acute and chronic rheumatic heart disease and describe the pathological basis of them. 6 describe the pathogenesis and pathological changes of infective endocarditis. 7 describe the pathological basis of clinical outcomes and complications of infective endocarditis. 8 describe the non infective causes of endocarditis.				
3/SBM-3/10 **Myocardial disease** • To know the causes, pathogenesis macroscopic and microscopic appearance of myocarditis • To be able to describe the different type of cardimaopathy and macroscopic appearance of heart in these conditions. • Tumours of the heart and blood vessels	1 describe the pathogenesis and pathological changes of myocarditis 2 describe the pathological basis of clinical outcomes and complications of myocarditis 3 describe the different types of cardiomyopathies 4 describe the pathological changes in these cardiomyopathies and their clinical significance. 5 list the common tumours of heart and blood vessels.	Lecture	1 Hr	Pathology	
3/SBM-3/11 **Pericardial disease** • To know pathogenesis and the macroscopic appearance of pericardial effusion and haemopericardium • To be able to describe pathological changes in the serous pericarditis, Fibrinous and serofibrinous pericarditis, Purulent or suppurative pericarditis, haemorhagic pericarditis, caseous pericarditis. • To know the pathogenesis and macroscopic appearance of pericardium in adhesive mediastinopericarditis and constrictive pericarditis.	1 describe the pathogenesis of pericardial effusions and haemopericardium 2 describe the pathogenesis and pathological changes changes in serous pericarditis, fibrinous and serofibrinous pericarditis, purulent or suppurative pericarditis, haemorrhagic pericarditis and caseous pericarditis. 3 describe the pathological basis of clinical outcomes in these conditions. 4 describe the pathogenesis and pathological changes and clinical outcomes in adhesive mediastinopericarditis and constrictive pericarditis.	Lecture	1Hr	Pathology	