

# Musculo Skeletal Pathology

**Duration: 03 Weeks (15 days)**

Topic/ Concept	Objectives	Time	T/L activity	Dept.	Comments
<b>3/SBM-06/01 Bone and cartilage - III</b>	<b>Student should be able to</b>				
<b>(a) Injury and repair – Fractures</b>	<ol style="list-style-type: none"> <li>1. Recall general pathology on fracture healing and repair</li> <li>2. Apply the principles of wound healing to bone and cartilage</li> <li>3. Describe the immediate and late complications of fracture healing</li> </ol>	1hr	Lecture	Pathology	
<b>(b) Metabolic and endocrine and remodeling disorders (Osteoporosis, osteomalacia/rickets, Paget's diseases, hyperparathyroidism)</b>	<ol style="list-style-type: none"> <li>1. Recall normal bone metabolism</li> <li>2. Describe aetiology, pathogenesis and complications of Osteoporosis, osteomalacia/rickets, Paget's diseases and hyperparathyroidism</li> <li>3. Explain the basis of pathological fractures and clinical manifestation of complications mentioned in objective 2.</li> </ol>	1hr	Lecture	Pathology	
<b>(c) infections</b>	<ol style="list-style-type: none"> <li>1. Recall general pathology of acute and chronic inflammation</li> <li>2. Describe aetiopathogenesis, morphology and clinical manifestations of acute and chronic osteomyelitis Describe the complications of acute and chronic osteomyelitis.</li> </ol>	1hr	Lecture	Pathology	
<b>(d) Neoplastic (Primary and secondary)</b>	<ol style="list-style-type: none"> <li>1. Recall general pathology of carcinogenesis and spread of tumours</li> <li>2. Enumerate the primary cartilaginous and osseous tumours</li> <li>3. Describe the pathological features and correlate the radiological signs of common bone tumours</li> <li>4. Describe the pathological features of metastatic bone tumours</li> </ol>	1hr	Lecture  Specimen class (SGLA)	PTH	After these 4 lectures a 2hr SGLA for Specimen class
<b>(e) Congenital bone disorders</b>	Describe the aetiology, pathology and clinical manifestations of congenital bone diseases	1hr	Lecture	Paediatrics	

<p><b>(f) Imaging in bone diseases</b></p> <p><b>Nuclear medicine</b>  <b>Aim to explain application of nuclear medicine with regard to bone and joint disease</b></p>	<p>1. recognize basic radiological signs of bone diseases with a pathological basis (periosteal reaction, bone destruction/ lytic lesions (osteoclastic activity) and sclerosis (osteoblastic activity))</p> <p>2. recognise a simple fracture and the types of fractures on plain radiographs in adults &amp; children</p> <p>3. differentiate simple from pathological fracture</p> <p>4. recognize major manifestations of following conditions Hyperparathyroidism, Rickets, osteomalacia, osteoporosis, Acute and chronic osteomyelitis</p> <p>5. differentiate benign from malignant bone tumour</p> <p>6. recognise various manifestations of metastatic bone disease</p> <p>7. place of MRI in bone disease</p> <p>1. understand organ (bone) physiology and its function with regard to radio isotope intake</p> <p>2. understand when and how to use skeletal scintigraphy</p> <p>Contents- Basis of scintigraphic detection of</p> <p>1. bone tumors- primary and met static</p> <p>2. chronic infections- TB and osteomyelitis</p> <p>3. metabolic disorders- osteoporosis, pagets' disease</p> <p>4. bone trauma-sport injuries and child abuse</p> <p>5. joint diseases- septic arthritis, degenerative joint diseases, avascular necrosis</p>	<p>2hr</p> <p>2hr</p>	<p>Lecture</p> <p>Lecture</p>	<p>Radiology</p> <p>NMU</p>	
<p><b>3/SBM-06/02</b>  <b>Muscles – III</b></p>					
<p><b>Atrophy &amp; hypertrophy</b></p>	<p>Recall</p>		<p>Lecture (Foundation)</p>	<p>Pathology</p>	<p>Done in detail in FCP</p>
<p><b>(a) Mechanisms of dysfunction of muscles</b></p>	<p>1. Recall the physiology of the motor unit and its neural control</p> <p>2. outline how disorders at different levels in the control mechanisms affect muscle function</p>	<p>1hr</p>	<p>Lecture</p>	<p>Medicine (NS)</p>	

<b>(b) Diseases of muscle</b>	1. Classify muscle diseases on an aetiological basis	1hr	Lecture	Medicine (NS)	
	2. Describe the pathology and basic clinical features common to all muscle diseases 3. Describe the clinical features of common muscle diseases	1 hr	Lecture	Pathology	
<b>(c) Manifestations as a consequence of systemic, neural and joint disorders</b>	Covered in 3 above			Medicine (NS)	
<b>(d) Management of muscle disorders</b>	1. Describe the management of muscle disorders	1hr	Lecture	Medicine (NS)	
<b>3/SBM-06/03 Joints – III</b>					
<b>(a) Introductions to diseases of joints (Injury , inflammation, infections, degenerative)</b>		1hr	Lecture	Medicine	
<b>(b) Imaging in joint diseases</b>	1. recognize basic radiological signs of joint diseases 2. describe the radiological malfunction of common joint diseases	1hr	Lecture	Radiology	
<u>Skills</u>					
1. Identify fractures and dislocations by physical and radiological examination - II					To be covered in orthopaedic clinical appointment
2. Perform a clinical examination of muscle groups in each joint - III					
3. Perform a clinical examination of joints (knee, hip, shoulder) - II					
4. Examine the spine - I					
6. Carry out first-aid in bone and muscular injury - I					