



RESPIRATORY - II

MODULE

MBBS Year-3 (Academic Year 2020-2021)

KMU Central Curriculum Committee

Khyber Medical University, Phase V, Hayatabad | Peshawar

Table of contents

<i>List of themes</i>	3
<i>General learning outcomes</i>	3.
<i>Learning outcomes Theme 1</i>	4
<i>Learning outcomes Theme 2</i>	10.
<i>Practical work</i>	16

List of Themes

S. No	Theme	Duration
1	Cough with sputum, and fever.	Two weeks
2	Wheezy Chest and Shortness of breath	Two weeks

General Learning Outcomes:

At the end of this module, students will be able to:

1. Explain various lower respiratory tract infections
2. Explain obstructive respiratory diseases.
3. Describe various Granulomatous lung diseases
4. Prescribe medication according to guidelines for common respiratory disorders.
5. Describe medico legal aspect of asphyxial death.
6. Describe respiratory tract diseases of public health importance with emphasis on agent factors, epidemiology, preventive and control measures.
7. Describe management of common respiratory problems.

Theme 1: Cough with sputum, & fever			
Subject	Topic	SNo.	Learning Objectives At the end of this module, students will be able to :
Anatomy		1	Describe clinical anatomy of thorax including thoracic wall, lungs and trachea-bronchial tree anatomy
		2	Correlate the different developmental stages of lung with its congenital anomalies
		3	Describe the surface marking of clinically relevant areas of the respiratory system
Physiology		4	Describe the mechanics of ventilation and different volumes and capacities of lungs
		5	Describe respiratory gas exchange.
Biochemistry		6	Describe the effects of hyperventilation (e.g. Anxiety) and hypoventilation (e.g. COPD) on pH and blood gases, HCO ₃ and electrolytes.
Microbiology	Legionella	7	Describe Pathogenesis, Structure, Clinical Findings & Laboratory Diagnosis of Legionella infection
	Mycoplasma	8	Describe Pathogenesis, Structure, Clinical findings & Laboratory Diagnosis of mycoplasma infection.
	H-Influenza	9	Describe Pathogenesis, Structure, Clinical Findings & Laboratory Diagnosis of H-Influenza infection.
	Bordetella	10	Describe Pathogenesis, Structure, Clinical Findings & Laboratory Diagnosis of Bordetella infection

	Mycobacterium Tuberculosis	11	Describe Pathogenesis, Important Properties, Clinical Findings & Laboratory Diagnosis of Mycobacterium Tuberculosis.
	Pulmonary Infections	12	Describe community acquired pneumonia and its different types.
		13	Describe community acquired atypical Pneumonia.
		14	Describe etiology, pathogenesis & clinical features of nosocomial pneumonia.
		15	Describe etiology, pathogenesis & clinical features of pneumonia.
		16	Describe etiology, pathogenesis & clinical features of chronic pneumonia.
		17	Describe etiology, pathogenesis, clinical & radiologic features of Pulmonary Tuberculosis.
		18	Describe pneumonia in immunocompromised host.
		Granulomatous diseases	19
	20		Describe etiology, pathogenesis, clinical & radiologic features of hypersensitivity pneumonitis.
	21		Describe etiology, pathogenesis, clinical & radiologic features of pulmonary eosinophilia.
	Lung abscess	22	Define Lung Abscess
		23	Describe Pathogenesis, morphology & Clinical Course of Lung abscess

	Empyema	24	Describe empyema & its pathogenesis
	Laryngeal tumors	25	Describe laryngeal tumors.
Pharmacology	Anti-tussives	26	Classify Anti-tussives
	Cough Suppressants	27	Describe the pharmacology of Cough suppressants
	Expectorants	28	Describe the pharmacology of Expectorants, Mucolytic agents in cough
	Tuberculosis	29	Classify Anti tuberculous drugs
		30	Describe the pharmacology of First line antituberculosis drugs
		31	Describe the pharmacology of 2nd line antituberculosis drugs
		32	Discuss the drug treatment & duration of susceptible newly diagnosed pulmonary tuberculosis patient
		33	Discuss the development of resistance to mycobacterium tuberculosis against conventional antibiotics
34		Discuss the classification & duration of therapy in patients having MDR tuberculosis	
35	Discuss the drug treatment & duration of antitubercular therapy in pregnant woman & patients having Hepatic & Renal insufficiency		
36	Describe the rationale for the use of Multi Drug therapy against pulmonary tuberculosis.		

Community Medicine	Tuberculosis	37	Describe agent, host and environmental factors for the disease.	
		38	Describe DOTS strategy for Tuberculosis	
		39	Explain different preventive and control measures for Tuberculosis including "stop TB" and "End TB" strategies	
	Influenza	40	Describe types of influenza	
		41	Describe agent, host and environmental factors for the disease.	
		42	Explain the antigenic drift and antigenic shift	
		43	Describe various preventive and control measures for influenza	
	Forensic Medicine	Asphyxia (General Aspects)	44	Define asphyxia
			45	Define anoxia
			46	Enlist causes of anoxia
47			Explain causes of asphyxia	
48			Classify mechanical asphyxia	
49			Describe patho physiology of asphyxia	
50		Describe general signs of asphyxia		
Hanging		51	Define hanging	
		52	Describe causes of death in hanging	
		53	Explain mechanism of death in hanging	
	54	Describe the procedure of neck dissection in hanging		

		55	Describe autopsy findings in hanging
		56	Explain medico legal aspects of hanging
	Mechanical asphyxia (Strangulation)	57	Define strangulation
		58	Describe causes of death in strangulation
		59	Explain mechanism of death in strangulation
		60	Describe the procedure of neck dissection in strangulation
		61	Describe autopsy findings in strangulation
		62	Explain medico legal aspects of strangulation
	Drowning	63	Define drowning
		64	Describe causes of death in drowning
		65	Explain mechanism of death in drowning
		66	Describe types of drowning
		67	Describe autopsy findings in drowning
		68	Differentiate between ante and post mortem drowning
69		Explain medico legal aspects of drowning	
Suffocation	70	Define suffocation and explain its medico legal aspects.	
	Smothering		Define smothering
		72	Explain medico legal aspects of smothering
	Chocking	73	Define chocking
		74	Explain medico legal aspects of chocking
	Gagging	75	Define Gagging
		76	Explain medico legal aspects of Gagging

	Overlaying	77	Define overlying
		78	Explain medico legal aspects of overlying
	Traumatic asphyxia	79	Define traumatic asphyxia
		80	Describe autopsy findings of traumatic asphyxia
		81	Explain medico legal aspects of traumatic asphyxia
	Sexual asphyxia	82	Define sexual asphyxia
ENT	Larynx anatomy	83	Describe clinical anatomy of larynx.
	Laryngitis	84	Describe etiology, clinical feature, management of acute and chronic laryngitis.
Medicine	Respiratory symptoms	85	Describe approach to a patient of respiratory symptomatology
	Differential diagnosis	86	Discuss the differential diagnosis of granulomatous inflammation including TB
	Pulmonary TB	87	Describe the signs & symptoms, investigations, clinical diagnosis, management protocol & prognosis for TB and MDRTB according to WHO categories.
Pediatrics	Childhood Pneumonia	88	Classify pneumonia according to IMNCI (integrated management of neonatal and childhood illnesses)
		89	Describe the risk factors for recurrent pneumonia in childhood.
		90	Describe the etiological agents for Pneumonias according to the age of the child.
		91	Describe the indication for hospitalization of child with pneumonia.
Radiology		92	Describe the common radiological abnormalities on chest x-rays

Theme 2: Wheezy chest & shortness of breath			
Pathology	Atelectasis	93	Define Atelectasis
		94	Describe different types of atelectasis
	Acute Lung injury	95	Define Acute Respiratory distress Syndrome (ARDS)
		96	Describe Pathogenesis and morphological features of ARDS
	Obstructive Pulmonary disease	97	Define obstructive pulmonary disease and enlist its different types
		98	Define Emphysema
		99	Describe different types of emphysema
		100	Describe the pathogenesis morphology and underline course of emphysema
		101	Define chronic bronchitis
		102	Describe its pathogenesis and morphology
		103	Describe asthma and its pathogenesis
		104	Differentiate between types of asthma
		105	Describe morphology and clinical course of asthma
	Restrictive or infiltrative lung diseases	106	Define bronchiectasis, describe the causes, morphology and pathogenesis of bronchiectasis
		107	Define diffuse interstitial lung disease.
		108	Describe pathogenesis of diffuse interstitial lung disease.
109		Enlist major categories of chronic interstitial lung disease	

		110	Describe the fibrosing lung diseases.
		111	Describe pneumoconiosis, its morphology and different types.
		112	Describe drug and radiation induced pulmonary diseases.
	Diseases of vascular origin	113	Describe pulmonary embolism, hemorrhage and infarction.
		114	Describe pulmonary Hypertension.
		115	Describe diffuse alveolar hemorrhage syndromes.
	lung tumors	116	Describe carcinoma of lung, its etiology pathogenesis, morphology and clinical course.
		117	Differentiate between small cell lung carcinoma and non small cell lung carcinoma.
		118	Describe bronchial carcinoids
		119	Describe malignant mesothelioma and its morphology.
	Pleural lesions	120	Describe pleural effusion and pleuritis.
121		Describe pneumothorax ,Hemothorax and chylothorax	
Pharmacology	Asthma	122	Classify the Drugs used in the treatment of asthma
		123	Describe the role of beta 2 agonists used in Asthma
		124	Describe the role of Methylxanthine drugs used in Asthma
		125	Describe the role of Antimuscarinic agents used in Asthma

		126	Describe the role of Corticosteroids used in Asthma
		127	Describe the pharmacokinetic & pharmacodynamic aspects of Mast cell stabilizers used in Asthma
		128	Describe the pharmacokinetic & pharmacodynamic aspects of Leukotriene antagonist used in Asthma
		129	Describe the pharmacokinetic & pharmacodynamic aspects of Anti-IgE antibodies used in Asthma
		130	Describe drug treatment of acute and chronic asthma and status asthmatics
Community Medicine	Asthma	131	Describe the epidemiology & preventive measures of asthma.
		132	Define occupational asthma and describe its preventive measures.
	Pneumoconiosis	133	Describe various pneumoconiosis diseases.
		134	Describe the control and preventive measures of pneumoconiosis
	Diphtheria and Pertussis	135	Describe the epidemiological determinants of Diphtheria and Pertussis
		136	Describe preventive and control measures.
		137	Explain their current public health importance in Pakistan.
Forensic Medicine	Asphyxiant (CO)	138	Explain medico legal aspects of sexual asphyxia
		139	Enlist sources of CO poisoning
		140	Describe signs and symptoms of CO poisoning

		141	Explain treatment plan of CO poisoning
		142	Describe autopsy findings of CO poisoning
		143	Explain ML aspects of CO poisoning
	CO2	144	Enlist sources of CO2 poisoning
		145	Describe signs and symptoms of CO2 poisoning
		146	Explain treatment plan of CO2 poisoning
		147	Describe autopsy findings of CO2 poisoning
		148	Explain ML aspects of CO2 poisoning
		149	Enlist sources of H2S poisoning
		150	Describe signs and symptoms of H2S poisoning.
	H2S	151	Explain treatment plan of H2S poisoning
		152	Describe autopsy findings of CO poisoning
		153	Explain ML aspects of H2S poisoning
	War gases	154	Define war gases
		155	Classify war gases
		156	Describe medico legal aspects of war gases
ENT	Non –Neoplastic laryngeal lesions	157	Describe clinical features and management of different non neoplastic laryngeal lesions (Vocal cords nodules, polyps, and laryngocele)
	Neoplastic laryngeal lesions	158	Describe the clinical feature and management of neoplastic laryngeal lesions.
	Vocal cord Palsy	159	Describe the clinical feature and management of vocal cord palsy

	Emergency Tracheotomy	160	Describe the indication, contraindication, complications, and operative steps to perform emergency tracheotomy.
Medicine	COPD	161	Describe the epidemiology, patho-physiology and etiology of COPD
		162	Explain the clinical presentation of COPD
		163	Describe the investigations required for the diagnosis of COPD
		164	Describe the management plan of COPD
	Asthma	165	Describe the epidemiology, pathophysiology, etiology, and contributing factors related to the development of asthma
		166	Describe the clinical presentation, diagnosis and treatment of asthma
		167	Classify asthma on the basis of clinical presentation into mild, moderate, life threatening and near fatal asthma
		168	Explain the stepwise pharmacologic approach for the treatment of asthma status asthmaticus
		169	Describe long-term asthma management plan including pharmacological, physical and occupational health education.
	Respiratory failure	170	Describe the long term Oxygen therapy in COPD
Pneumothorax	171	Describe the etiology, classification, diagnosis and management of pneumothorax	
	Pleural effusion	172	Describe the causes of exudates and transudate effusion.

		173	Differentiate between exudate and transudate effusion.
Pediatrics	ARIs(Croup and Epiglottitis)	174	Differentiate Croup and epiglottitis based on etiology and clinical features.
		175	Explain the management of croup and epiglottitis.
		176	Explain the most effective ways to prevent and control ARIs
	Respiratory distress syndrome(RDS)	177	Describe the risk factors, clinical features, investigation and management for RDS.
	Reactive air way disease.	178	Describe the different types of wheezers in pediatrics.
		179	Discuss the risk factor for persistent wheezing /asthma.
		180	Describe management of bronchiolitis.
	Cystic fibrosis and bronchiectasis	181	Define bronchiectasis and its risk factors.
		182	Describe diagnostic criteria for cystic fibrosis.
		183	Describe the GI, respiratory and other systemic manifestations of cystic fibrosis.

Practical's: Theme 1 Cough with sputum and Fever			
Subject	Topic	SNo.	LOs
Pharmacology		1.	Write the proper prescription for Pulmonary Tuberculosis
Forensic Medicine		2.	Demonstrate the differences between hanging and strangulation on a model
		3	Demonstrate the differences between different types of hanging on a model
Community Medicine	Visit	4	Visit to TB control program center
	Mask wearing.	5	Demonstrate Identification of different types of masks and its uses.
		6	Demonstrate the proper protocol for wearing a mask
Practical's: Theme 2 Wheezy chest and shortness of breath			
Pharmacology		7	Demonstrate the proper stepwise use of metered dose inhaler along with spacer.
		8	Write the proper prescription for Acute & Chronic Asthmatic patients
		9	Write the proper prescription for patients with status Asthmaticus