

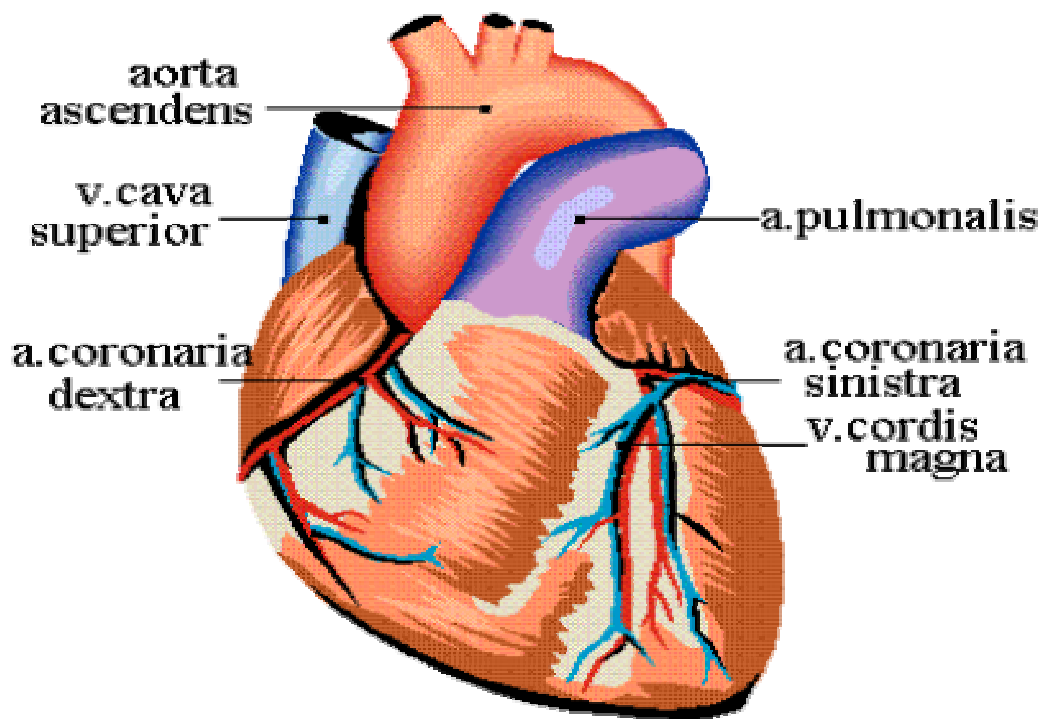
AJK Medical College, Muzaffarabad



STUDY GUIDE

4th Year

Cardiovascular System (CVS-II-0312)



Duration: 4 -Weeks

DEPARTMENT OF MEDICAL EDUCATION

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CVS Module Team

Dr. Sarosh Majid Salaria	Planner
Dr. Wafa Omer	Coordinator
Dr. Ziyad Afzal Kiyani	DME
Brig. (R) Prof. Dr. Ahmad Khan	Member
Dr. Tahir Aziz	Member
Dr. Javed Akhter Rathore	Member
Dr. Adnan Mehraj Qureshi	Member
Dr. Babar Bilal	Member
Dr. Rizwan Abid	Member

RATIONALE

Cardiovascular system plays pivotal role to make our cells alive. Heart is not only the core structure of body but spiritual centre of our soul so deserves a lot of care. Cardiovascular diseases are the leading cause of morbidity and mortality worldwide. With the innovative approaches in medical sciences the death rate has been controlled but morbidity is rising day by day. Major cardiovascular disorders including congenital heart diseases, ischemic heart diseases, cardiomyopathies, valvular heart diseases, atherosclerosis. Hypertension and vasculitides will remain the hallmarks of this module but you will also get the opportunity to study epidemiology, risk factors, life style modification of cardiovascular diseases under the roof of community medicine. We wish you good luck and pray you to learn out of it as much as possible.

Organization of Module:

The module consists of six themes, 1 PBL; each based on a real life situation. Each theme has its explicit Learning Objectives (LOs). The module will employ different modes of instruction, briefly described below. Major emphasis will be on real life patient examination, discussion, laboratory and radiological test investigation and interpretation, case analysis, diagnosis, deductions and management; all by the students and guided by the faculty. Each theme in this module is augmented with a clinical scenarios. The clinical presentation of themes will give you a clue that how a patient presents in a real life situation and to draw a conclusion from the information given by the patient and signs elicited by your clinical examination. All this information is included in the respective clinical cases. Your daily activities would be divided into different slots. Please refer to time table for more details regarding organization of learning activities.

Teaching Strategies:

The content of this module will be delivered by a combination of different teaching strategies. These include small group discussions (SGD), large group interactive sessions (LGIS), history taking, patient examination, laboratory investigations and tests interpretation, discussions Clinicopathological conference (CPC) and journal club. Entire curriculum will be delivered by clinical case scenarios each covering a theme. Read the cases and the objectives of the theme which you are supposed to encounter next day, understand and explain the case to yourself and study the relevant information. The students will present clinical cases based on scenarios themselves and display the relevant radiological and pathological features. Following learning/teaching strategies will be used in CVS Module:

Small Group Discussion (SGD):

Main bulk of the course content will be delivered in small group sessions. Each theme has an associated case. The case will be centered around which learning will take place. Every group will have a facilitator assigned to it. The facilitator will be there to keep you on track, giving you maximum liberty to discuss and achieve the objectives as a group. Small groups will be followed by a wrap up session to standardize learning. Rest of the information will be in the schedule/ time table.

Large Group Interactive Sessions (LGIS):

LGIS will be employed at times to augment small groups. By and large they will be used to pass on general concepts regarding the theme. Large group instruction will be employed at times sparingly. Attend large group sessions with the following focus:

- Identify important points.
- Ask questions on concepts not well understood in the text books.
- Measure your learning comprehension

Clinicopathological Conference (CPC):

The students will be required to present cases related to the themes in groups. They will collect the information about the different facets of patient's disease and present to the whole class with the help of appropriate histopathological, radiological and clinical slides. It will be followed by question, answer and discussion.

Practical Skills:

Selection of tests, collection of the specimen, examination and interpretation of specimens/test reports, microscopic slides, culture plates/media examination and radiological images.

Self-Directed Learning (SDL):

A task will be given in SDL regarding the theme to be discussed before PBL. This will help to prepare you a bit before the theme is under discussion. A few SDLs have been added in between to create an environment for you to search literature as well as to deduce and synthesize information from different sources to meet the learning objectives.

Assessment:

In this module, you will have formative and summative assessment. This will give you an idea about the format

of the examination that you will go through at the end of the year. This will be followed by feedback on your performance in the exam. Marks obtained in the module examination will contribute 30% (internal assessment) towards end of year Professional University Examination. **There is no re-sit exam for module written assessment and block IPE** under any circumstances. If you miss them, your internal assessment will be recorded as zero. No excuse of any kind is permissible for absence in module or IPE assessment.

Themes/Core Contents

TOS

1	Blue Baby & Pink Baby (Congenital Heart Disease)	15%
2	Cardiac Pain	20%
3	Valvular Heart Disease	15%
4	Silent Killer	20%
5	Out of Rhythm	15%
6	Broken Heart	15%

Theme 1: Blue Baby & Pink Baby (Congenital Heart Disease)

Learning Objectives

At the end of the module the students will insha Allah be able to:

1. Revisit embryology of heart and great vessels
2. Common Cyanotic Heart Defects
 - a. Tetralogy of Fallot
 - b. Transposition of Great Vessels
 - c. Ebstein Anomaly
 - d. Totally anomalous pulmonary venous drainage
3. Acyanotic Heart Defects
 - a. Atrial Septal Defect
 - b. Ventricular Septal Defect
 - c. Persistent Ductus Arteriosus
 - d. Coarctation of Aorta
 - e. Bicuspid Aortic Valve
4. Skills
 - a. History and physical examination of patient with congenital heart disease
 - b. Health education (counselling for its complication, nutrition and modification in life style)
 - c. Relevant investigations (ECG, Echo Chest X-Ray, Cor. Angiography)

Theme 2: Cardiac Pain

Learning Objectives

At the end of the module the students will insha Allah be able to:

1. Describe the pathogenic sequences by which Ischemic heart disease produces clinical features mentioning the mechanism, temporal relationship, likelihood of occurrence and prognosis for each of the following;
 - a. Coronary artery disease (atherosclerotic)
 - b. Non coronary artery disease (Vasculitis, Kawasaki etc.)
 - c. Major risk factors
 - d. Clinical presentation
 - e. Complications
 - f. Diagnostic criteria
2. Cardiac neurosis
3. Classify dyslipidemia & relation to CVD
4. Peripheral Vascular Diseases
5. Vasculitis

6. SKILLS

- a. Practical Pathology
- b. History & Physical Examination
- c. Interpreting ECG, Biomarkers of Cardiac Necrosis (ETT, Cor. Angiography)
- d. Counselling for primary and secondary prevention of heart disease (Nutritional Counseling)

Theme 3: Valvular Heart Disease

Learning Objectives

At the end of the module the students will insha Allah be able to:

1. Discuss valvular heart disease in terms of
 - a. Etiology (Rheumatic & Auto-immune)
 - b. Pathogenesis
 - c. Complications including extra cardiac lesions
 - d. Symptoms, signs (Revised Jones Criteria)
 - e. laboratory diagnosis
2. Discuss the etiology, morphology and complications of pericarditis
3. Discuss infectious endocarditis-valvulitis in terms of
 - a. Causative agents
 - b. Relative frequency
 - c. Predisposing factors
 - d. Laboratory findings
 - e. Complications and prognosis

Theme 4: Silent Killer

Learning Objectives

At the end of the module the students will insha Allah be able to:

1. Define & discuss hypertension in terms of
 - a. Primary & Secondary Hypertension
 - b. Target Organs/ Target Organs Damage
 - c. Complications
 - d. Diagnosis
 - e. Management
 - f. Prevention/ Life Style Modifications

Theme 5: Out of Rhythm

Learning Objectives

At the end of the module the students will insha Allah be able to:

1. Discuss arrhythmias (Ventricular & Supraventricular arrhythmias) in terms of:
 - a. Etiology
 - b. Presentation/Diagnosis
2. Skills
 - a. Interpretation of ECG
 - b. Management

Theme 6: Broken Heart

Learning Objectives

At the end of the module the students will insha Allah be able to:

1. Discuss heart failure in terms of
 - a. Etiology (Cardiomyopathies, Other Cardiac Diseases)
 - b. Pathogenesis

- c. Types
 - d. Clinical Presentation
 - e. Diagnosis
 - f. Management
2. Discuss the surgical intervention for cardiac diseases.
 3. classify the tumors of CVS in terms of incidence, location, diagnosis and prognosis
 4. Skills
 - a. History taking
 - b. Physical examination
 - c. Relative investigations (ECG, Echo, X-Ray, Angiography)

PBL-1A

A 67-year-old women presented to A&E department of AIMS with the complaint of sudden loss of vision of left eye. She gives history of frequent unilateral headaches on left side, pain in left jaw on chewing and continuous whistling sound in the left ear. She is a known case of polymyalgia rheumatica. On physical examination of the patient, there is tenderness over the left temporal area, decreased pulses throughout the body and positive carotid bruit on left side. Fundoscopy shows evidence of ischemia in left eye. Lab studies are as follows:

Hb	11.4 g/dL
WBC	$10.2 \times 10^3/\text{mm}^3$
Platelets	$480 \times 10^6/\text{mm}^3$
ESR	65mm/hr
CRP	↑↑
AST	85 IU/L
ALT	210 IU/L
ALP	417 IU/L

Resource for Learning & Reference books

Robins Basic Pathology by vinay Kumar, Abdul K abbas, Nelson Fausto, Richard. Mitchell
 Rapid Review Pathology, Edwerd F. Goljan.
 Tietz Fundamentals of clinical chemistry by Carl A. Burtis, Adward R. Ashwood, Vavid E. Burns
 Jawetz review of Medical Microbiology and immunology by warren Levinsion
 Muiris Textbook of Pathology by Levinson
 Parikh's Textbook of Medical Jurispeudence forensic Medicine and Toxicology by C.K. Parikh
 Park's Textbook of Preventive and Social Medicine by K. Park
 Public Health and Community Medicine by Muhammad Ilyas, Iftkhar Ahmed, Ghulam Qadir, Mecha Fhansotia
 Kaplan book of clinical chemistry
 Medscape.com
 Cleveland clinic.com
 Davidson's Principal & Practice of Medicine
 Community Medicine K. Park & Ilyas Ansari

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CVS Module, 4th Year

WEEK-1

Date →	5 th Sep, 2016	6 th Sep, 2016	7 th Sep, 2016	8 th Sep, 2016	9 th Sep, 2016		
↓Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY		
8:00am-9:00am	REPRODUCTION MODULE	REPRODUCTION MODULE	REPRODUCTION MODULE	Introduction to CVS Module Dr. Sarosh & Module Team	LGIS Congenital Heart Diseases Cyanotic & Acyanotic Dr. Manzoor Ali		
9:00am-10:00am				LGIS Hemodynamics of Congenital Heart Disease Dr. A.G Nagi	LGIS Cardiac Cycle Dr. Waqar Haider		
10:15am-1:15pm				CLINICAL ROTATIONS	PBL-1A Team-3 (Pathology)		
1:30pm-2:00pm				B R E A K			
2:00pm-3:00pm				LGIS Approach to Patient with various symptoms including nocturia Dr. Rizwan Abid	SDL		
3:00pm-4:00pm				LGIS Atherosclerosis Dr. Sarosh			

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WEEK-2

Date →	12 th Sep, 2016	13 th Sep, 2016	14 th Sep, 2016	15 th Sep, 2016	16 th Sep, 2016
↓Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00am-9:00am	EID HOLIDAYS			Household Survey/ Research Work Community Medicine	
9:00am-10:00am					
10:15am-1:15pm					
1:30pm-2:00pm					
2:00pm-3:00pm					
3:00pm-4:00pm					

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CVS Module, 4th Year

WEEK-3

Date →	19 th Sep, 2016	20 th Sep, 2016	21 st Sep, 2016	22 nd Sep, 2016	23 rd Sep, 2016
↓Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00am-9:00am	Written Assessment Renal + Reproduction Module	LGIS Arrhythmias Dr. Rizwan Abid	LGIS Changes in CVS Hemodynamics During Pregnancy Dr. Shafaq Hanif	LGIS Cardiomyopathies Dr. Saleem Abbasi	LGIS Etiology, Types & Management of Hypertension Dr. Javed Rathore
9:00am-10:00am		LGIS Acute Coronary Syndrome Dr. Babar Bilal	LGIS IHD Dr. Waqar Haider	LGIS ECG Interpretation Dr. Waqar Haider	LGIS Diagnostic Modalities in CVS Dr. Shoukar Dar
10:15am-1:15pm	CLINICAL ROTATIONS	CLINICAL ROTATIONS	CLINICAL ROTATIONS	CLINICAL ROTATIONS	PBL-1B Dr. Wafa & Team-3
1:30pm-2:00pm	B R E A K				
2:00pm-3:00pm	LGIS Valvular Heart Disease Dr. Babar Bilal	LGIS Aneurysm & Vasculitis Dr. Anwar	LGIS Endocarditis Dr. Sarosh & Dr. Waqar	LGIS Hyperlipidemia & Lipid Profile Dr. Wafa Omer	SGD Risk Factor in Life Style Modification & Coronary Heart Disease Dr. Ahmad Khan & Team LGIS Cardiomyopathies Dr. Anwar
3:00pm-4:00pm	LGIS Cardiac Neurosis Dr. Ayasha	LGIS Rheumatic Fever Dr. Muhammad Munir	LGIS Cardiac Biomarkers Maj. Dr. Saba Irum	LGIS Myocardial Hypertrophy Dr. Anwar	

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WEEK-4

Date →	26 th Sep, 2016	27 th Sep, 2016	28 th Sep, 2016	29 th Sep, 2016	30 th Sep, 2016	
↓Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	
8:00am-9:00am	LGIS Heart Failure in Children Dr. Tahir Aziz	WRITTEN ASSESSMENT	SDL	SDL	IPA	
9:00am-10:00am	LGIS Surgical Intervention of Cardiac Disease Dr. Raja Ejaz					
10:15am-1:15pm	CLINICAL ROTATIONS	CLINICAL ROTATIONS	CLINICAL ROTATIONS	CLINICAL ROTATIONS		
1:30pm-2:00pm	B R E A K					
2:00pm-3:00pm	SDL	SDL	SDL	SDL		
3:00pm-4:00pm						

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CVS Module, 4th Year

WEEK-5

Date →	3 rd Oct 2016	4 th Oct 2016	5 th Oct 2016	6 th Oct 2016	7 th Oct 2016
↓Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00am-9:00am	Remedial/Revision	OSCE (Week 29-32) Last Batch	Remedial/Revision	Remedial/Revision	Remedial/Revision
9:00am-10:00am					
10:15am-1:15pm					
1:30pm-2:00pm					
2:00pm-3:00pm					
3:00pm-4:00pm					



Inquires & trouble shooting

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