

**AJK Medical College**  
**Muzaffarabad**  
**Cardiovascular System Module**  
(CVS-IV-0314)  
**Final Year MBBS**



**Duration: 2-weeks**  
**DEPARTMENT OF MEDICAL EDUCATION**

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## **CVS Module Team**

- |    |                          |             |
|----|--------------------------|-------------|
| 1. | Dr. Javed Akhtar Rathore | Planner     |
| 2. | Dr. Rizwan Abid          | Coordinator |
| 3. | Dr. Ziyad Afzal Kayani   | Member      |
| 4. | Dr. Bushra               | Member      |
| 5. | Dr. Saleem Abbasi        | Member      |
| 6. | Dr. Abdul Khalid Awan    | DME         |

## **Background**

Cardiovascular diseases (CVDs), including heart disease and stroke, are the world's largest killers, claiming 17.3 million lives a year while in Pakistan, coronary heart disease claims about 200,000 lives per year that is 410/100,000 of the population and the situation is alarming as the number is consistently on the rise. Studies reveal that more than two-thirds of the total deaths by cardiovascular diseases occur in developing countries. The CVDs take lives prematurely and by 2030, it is expected that 23 million people will die from CVDs annually. Pakistani population has one of the highest risks of coronary heart disease (CHD) in the world. In Pakistan, 30 to 40 per cent of all deaths are due to cardiovascular diseases (CVD) and CHD is now the leading cause of death in Pakistan.

## **Rationale**

Cardiovascular system plays pivotal role to make our cells alive. 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. 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 clinical features investigations and management of above said conditions. The risk factors and life style modification of cardiovascular diseases needs special attention. We will try our level best to make you learn out of it as much as possible.

## **Goal**

The goal of this module is to achieve the highest professional standards for patient care, prevention and management of cardiovascular diseases.

## **Competencies:**

- 1) Patient care
- 2) Medical knowledge
- 3) Communication skills
- 4) Professional behavior and ethics

## **Outcomes:**

At the end of this module you will be able to:

- 1- Evaluate patients suffering from cardiovascular diseases.
- 2- Carryout and interpret relevant and cost effective investigation
- 3- Take measures for prevention of disease and contribute towards promotion of health.
- 4- Refer the cases for specialist care at appropriate time.
- 5- Effectively communicates with the patient families, paramedic, nurses and other individuals.
- 6- Deliver proper information to the patient for a shared plan of care.
- 7- To demonstrate professional attitude, values and perspectives in relation to himself and others.

## **Organization of Module:**

The module consists of six themes, 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 will be supplemented by covering different aspect by LGIS and hospital based clerkships scenarios. Your daily activities would be divided into different LGIS and clerkships. Please refer to time table for more details regarding organization of learning activities.

## **Teaching Strategies:**

Your predominant activities during this module will be clinical clerkship. You will be actively involved in evaluation and management of patients in teaching hospitals. There will be two LGIS (45-minutes each) in the morning. This activity will be used to activate your prior knowledge of basic and clinical subjects and to pass on general concepts regarding the themes. It will also provide you guidance for clinical activities and correction of any misconceptions.

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

Entire curriculum will be delivered by clinical case scenarios each covering a theme. Read carefully objectives of the theme which you are supposed to encounter during clinical clerkships.

## **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 OSCE** 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**

<b>1</b>	<b>Blue Baby (Congenital Heart Disease)</b>	<b>10%</b>
<b>2</b>	<b>Chest Pain AMI Pericarditis</b>	<b>20%</b>
<b>3</b>	<b>Valvular Heart Disease</b>	<b>20%</b>
<b>4</b>	<b>Silent Killer –Atherosclerosis</b>	<b>20%</b>
<b>5</b>	<b>Beating Heart -Bradyarrhythmias Tachyarrhythmias</b>	<b>15%</b>
<b>6</b>	<b>Failing Heart Myocarditis pericarditis, Infective Heart Disease</b>	<b>15%</b>
	<b>Grand Total</b>	<b>100%</b>

**Theme 1: Blue Baby (Congenital Heart Disease)**

**Learning Objectives**

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

Describe clinical features investigations and management of following conditions

1. Common Cyanotic Heart Defects
  - a. Tetralogy of Fallot
  - b. Transposition of Great Vessels
  - c. Ebstein Anomaly
  - d. Totally anomalous pulmonary venous drainage
2. Acyanotic Heart Defects
  - a. Atrial Septal Defect
  - b. Ventricular Septal Defect
  - c. Persistent Ductus Arteriosus
  - d. Coarctation of Aorta
  - e. Bicuspid Aortic Valve
3. Cyanosis in new born
4. Recurrent/persistent breathlessness with or without murmur
5. Central cyanosis in CHD & congestive heart failure
6. Eisenmenger syndrome
7. Skills
  - a. History and physical examination of patient with congenital heart disease
  - b. Health education (counselling for its complication, nutrition and management )
  - c. Relevant investigations and interpretation (ECG, Echo Chest X-Ray, Coronary Angiography)

**Theme 2: chest pain**

**Learning Objectives**

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

1. Describe the aetiology clinical features, investigations, management and prognosis for each of the followings condition
  - a. ST segment elevation MYOCARDIAL INFARCTION
  - b. Non ST segment elevation MYOCARDIAL INFARCTION and unstable angina
  - c. Ischaemic Heart Disease
  - d. Renovascular disease
  - e. Deep venous thrombosis and thromboembolism
  - f. Aortic Dissections

- g. Peripheral Arterial Disease
2. **SKILLS**
- a. Practical clerkship in hospital
  - b. History & Physical Examination
  - c. Interpretation of clinical scenario CXR ,ECG, Biomarkers of Cardiac Necrosis (ETT, Cor. Angiography)
  - d. Counselling for prevention and risks stratification

**Theme 3: Valvular Heart Disease**

**Learning Objectives**

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

1. Describe aetiology clinical features, investigations and management of valvular heart disease in followings conditions
  - a. Rheumatic heart diseases(Revised Jones Criteria)
  - b. Aortic valve disease
  - c. Mitral valve disease
  - d. Congenital Heart Disease in adult
  - e. Infective endocarditis
2. Discuss the etiology, morphology and complications of pericarditis
3. Discuss infectious endocarditis-valvulitis in terms of

**Theme 4: Silent Killer**

**Learning Objectives**

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

1. Describe clinical features investigations and management of following conditions
  - a. Hypertension
  - b. Ischaemic Heart diseases
  - c. Aortic Dissections
  - d. Peripheral arterial Disease
  - e. Acute limb ischaemia
  - f. Hypertensive disorder in pregnancy
  - g. Pregnancy with cardiac disorders
  - h. Systemic diseases and heart

**Theme 5: Beating Rhythm**

**Learning Objectives**

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

1. a. Describe clinical features, diagnosis, investigations and management of Ventricular and supraventricular tachycardia b. Describe clinical features, diagnosis, investigations and management of Bradyarrhythmias
2. BLS ACLS
3. Skills
  - a. Interpretation of ECG
  - b. Management of arrhythmias Algorithm

**Theme 6: Failing Heart**

**Learning Objectives**

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

1. Describe clinical features investigations and management of following conditions
  - a. Cardiomyopathies and myocarditis
  - b. Heart failure
  - c. Pericardial effusion
2. classify the tumors of CVS
3. Skills/clerkships inside hospital
  - a. History taking
  - b. Physical examination
  - c. Relative investigations (ECG, Echo, X-Ray, Angiography)
  - d. Clinical scenario

# AJK Medical College, Muzaffarabad

## CVS Module, Class of 2017 (5<sup>th</sup> Year)

### WEEK-1

Date →						
↓Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:00am - 8:40am	Introduction to CVS Module <b>Prof. Javed Rathore &amp; Module Team</b>	<b>LGIS</b> Congenital Heart Diseases <b>Dr. Rizwan Abid</b>	<b>SGD</b> Rheumatic Fever & heart disease <b>Prof. Javed Rathore</b>	<b>LGIS</b> Hypertension <b>Dr. Khalid Awan</b>	<b>LGIS</b> Acute myocardial infarction <b>Dr. Babar Bilal</b>	<b>CLINICAL ROTATIONS</b> (8:00 AM to 2:00 PM)
8:45am - 9:25am	<b>LGIS</b> Chest pain & IHD <b>Dr. Ashfaq Ahmed</b>	<b>LGIS</b> Congestive cardiac failure <b>Dr. Saleem Abbasi</b>	<b>LGIS</b> Infective endocarditic <b>Dr. Rizwan Abid</b>	<b>LGIS</b> Peripheral arterial disease & limb ischemia <b>Prof. Adnan Mehraj</b>	<b>LGIS</b> Valvular heart disease <b>Dr. Babar Bilal</b>	
9:30am-2:00pm	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b> (9:30 AM to 12:30PM)	
<b>Break (2:00 – 5:00 PM)</b>						
5:00-8:00 pm	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATION S</b>

# AJK Medical College, Muzaffarabad

## CVS Module, Class of 2017 (5<sup>th</sup> Year)

### WEEK-2

↓Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:00a m- 8:40a m	<b>LGIS</b> ECG Interpretation of SVT and atrial arrhythmias fibrillation <b>Dr. Ashfaq Ahmed</b>	<b>LGIS</b> Brady arrhythmias And Tachyarrhythe mias <b>Dr. Ali Arshad</b>	<b>LGIS</b> Pericardial disease Ventricular tachycardia <b>Dr. Ali Arshad</b>	<b>LGIS</b> Epidemiology, Risk Factors & Life Style Modification for Cardiovascular Disease <b>Prof. Brig® Ahmed Khan</b>	<b>LGIS</b> Management of Cardiovascula r disorders in pregnancy  <b>Dr. Shafaq Haneef</b>	<b>CLINICAL ROTATIONS (8:00 AM to 2:00 PM)</b>
8:45a m- 9:25a m			<b>LIGS</b> Cardiomyopathy & myocarditis <b>Dr. Ashfaq</b>			
<b>9:30am-2:00pm</b>	<b>CLINICAL ROTATION S</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	
<b>Break (2:00 – 5:00 PM)</b>						
<b>5:00-8:00 pm</b>	<b>CLINICAL ROTATION S</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATIONS</b>	<b>CLINICAL ROTATION S</b>	<b>CLINICAL ROTATION S</b>

# **Resource for Learning &** **Reference books**

- Harrison's principles of medicine 19<sup>th</sup> edition, 2015
- Davidson's Principles & Practice of Medicine 21<sup>st</sup> edition 2010
- BNF 69 March 2015-september 2015
- Perveen J Kumar book of medicine





Inquires & trouble shooting

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