

POST GRADUATE DIPLOMA IN CLINICAL
CARDIOLOGY (PGDCC)

Term-End Examination

01541

June, 2013

MCC-004 : COMMON CARDIOVASCULAR DISEASES - II

Time : 2 hours

Maximum Marks : 60

Note :

- (i) There will be multiple choice type of questions in this examination which are to be answered in OMR Answer Sheets.
- (ii) All questions are **compulsory**.
- (iii) Each question will have four options and only one of them is correct. Answers have to be marked in figures in the appropriate rectangular boxes corresponding to what is the correct answer and then blacken the circle for the same number in that column by using HB or lead pencil and not by ball pen in OMR Answer Sheets.
- (iv) If any candidate marks more than one option it will be taken as the wrong answer and no marks will be awarded for this.
- (v) There will be **90** questions in this paper and each question carries **equal** marks.
- (vi) There will be no negative marking for wrong answers.
- (vii) No candidate shall leave the examination hall at least for one hour after the commencement of the examination.

1. Which of the following is **not true** regarding Rheumatic fever
 - (1) Immunological mediated connective tissue disorder following infection of throat by Group A Streptococci
 - (2) It licks the heart and bites the joint in younger individuals
 - (3) Maximum incidences is in the age group of 5-15 years
 - (4) There is resurgence of rheumatic fever due to increased virulence of Streptococci

2. Pathogenesis of Acute Rheumatic Fever - which of the following is **wrong** :
 - (1) Abnormal immune response of heart
 - (2) Toxic effect of extracellular toxins of Group A Streptococci
 - (3) Streptococcal M protein cross reacts with human cardiac myosin
 - (4) Streptococcal antibodies cross react with caudate nucleus

3. Which of the following statements regarding clinical features of acute rheumatic fever is **wrong** :
 - (1) subcutaneous nodules are always associated with carditis
 - (2) diagnosis requires two major or one major and two minor criteria
 - (3) supportive evidence of Streptococcal infection is always required in all types of presentation
 - (4) Valvulitis produces Carey Coombs murmur

4. In Rheumatic fever, which of the following statements is **not correct** :
 - (1) Severity of carditis determines prognosis
 - (2) Recurrence of rheumatic fever is common in children
 - (3) If Carditis occurs in first attack chance of carditis in recurrences is high
 - (4) Children with no carditis in first attack will never have cardiac murmurs in long term followup.

5. Prevention of rheumatic fever :
 - (A) Prompt treatment of pharyngitis with penicillin
 - (B) Injectable penicillin is inferior to oral penicillin
 - (C) Those with Carditis should have prophylaxis up to 40 years of age
 - (D) Vaccines are routinely recommended for prophylaxis
 Which of the above are **correct** :
 - (1) A + C (2) B + D (3) A + B + C (4) B + C + D

6. Following rheumatic fever
- (A) Commissures of mitral valve escape from fibrosis
 - (B) Mitral orifice becomes like fishmouth
 - (C) Subvalvular fusion causes secondary orifice
 - (D) Hemodynamic stress can hasten the process of fibrosis
- Which of above statements are **correct** :
- (1) A + C (2) A + B + C (3) B + D (4) B + C + D
7. Which of the following regarding subcutaneous nodules in rheumatic fever is **correct** :
- (A) painful and tender
 - (B) freely movable
 - (C) occur on extensor surface of elbows, knees and spine
 - (D) occur in 20-25% of cases
- (1) A + C (2) B + D (3) B + C (4) C + D
8. Which of the following regarding ASO titres is **not correct** :
- (1) two-fold rise in samples taken 2-4 weeks interval is significant
 - (2) not useful for diagnosis of chorea
 - (3) return to normal levels before antideoxyribonuclease B levels
 - (4) more than 250 Todd units significant in children
9. Which of the following is **incorrect** regarding rheumatic polyarthrits :
- (1) involves larger joints (2) fleeting in character
 - (3) can persist beyond 6 weeks (4) axial skeleton is spared
10. Which of the following is **incorrect** regarding rheumatic chorea :
- (1) is a late manifestation of rheumatic fever
 - (2) triggered by emotional disturbances
 - (3) occurs in less than 3% of cases of rheumatic fever
 - (4) many last for weeks to months
11. Which of the following statements about infective endocarditis is **incorrect** :
- (1) more common in men
 - (2) more common in older persons
 - (3) rheumatic valvular disease is a common predisposing lesion
 - (4) among congenital heart disease, it is more common in ASD

12. Which of the following statements about clinical features of infective endocarditis is **incorrect** :
- (1) Fever and new murmur or changes in preexisting murmur is common
 - (2) Worsening cardiac failure due to valve destruction
 - (3) Roth spots are macular non tender lesions in hand
 - (4) Worsening of renal function is due to disease as well as drugs
13. Echo in Infective Endocarditis :
- (A) TTE has higher sensitivity and specificity for detecting vegetation
 - (B) TEE is better in PVE
 - (C) Vegetations show independent mobility
 - (D) TTE is more useful to diagnose myocardial abscess
- Which of the above are **correct** :
- (1) A + C (2) B + D (3) A + B (4) B + C
14. Which of the following regarding Neonatal infective endocarditis is **incorrect** :
- (1) involves tricuspid valve
 - (2) there is often structural abnormality of heart
 - (3) carries high mortality
 - (4) consequence of infected vascular access catheters
15. As per Duke's criteria, infective endocarditis is said to be **possible when** :
- (1) Two major criteria (2) One major + one minor criteria
 - (3) Five minor criteria (4) None of the above
16. The following are immunological phenomenon of infective endocarditis **except** :
- (1) Janeway lesion (2) Osler's nodes
 - (3) Roth's sports (4) Rheumatoid factor
17. Renal dysfunction in infective endocarditis is **caused** by the following :
- (1) immune complex glomerulonephritis
 - (2) aminoglycoside induced injury
 - (3) LV dysfunction
 - (4) all of the above
18. Following regimens can be tried in culture negative endocarditis **except** :
- (1) Ampicillin + Gentamycin
 - (2) Ceftriaxone + Gentamicin
 - (3) Vancomycin to be added if prosthetic valve is present
 - (4) Rifampicin + Gentamicin

19. Which of the following statements regarding treatment of infective endocarditis is **incorrect** ?
- (1) Duration of antibiotic therapy for Penicillin susceptible streptococcus viridans in 4 weeks
 - (2) Endocarditis caused by Streptococci highly resistant to Penicillin should be treated as enterococcal endocarditis
 - (3) All enterococcal endocarditis must be tested for antimicrobial susceptibility to select optimal therapy
 - (4) In Penicillin allergic patients, cephalosporins can be substituted
20. Chemoprophylaxis against infective endocarditis is indicated in the following conditions **except** :
- (1) Dental scaling
 - (2) Tonsillectomy
 - (3) Vaginal hysterectomy
 - (4) Cystoscopy
21. Which of the following is **incorrect** regarding Mitral valve :
- (1) Mitral annulus posteriorly merges with aortic annulus
 - (2) posterior leaflet occupies 2/3rd of annulus
 - (3) posterior leaflets has three scallops
 - (4) primary chordae are twelve in number
22. Which of the following regarding clinical features of Mitral stenosis is **incorrect** :
- (1) chest pain is due to low stroke volume
 - (2) pulmonary infarct can cause pleuritic pain
 - (3) onset of atrial fibrillation may precipitate pulmonary edema
 - (4) syncope is unusual
23. Regarding Mitral stenosis, which of the following statements, is **wrong** :
- (1) QRS axis of less than 60 suggest severe mitral stenosis
 - (2) Right axis deviation indicates Pulmonary hypertension
 - (3) R/S ratio of more than 1 and V1 indicates pulmonary hypertension
 - (4) P mitrale is the most common ECG finding
24. In Echo Doppler assessment of Mitral stenosis, which of the following statements is **wrong** :
- (1) In atrial fibrillation, average of valve gradient in 5 cycles to be taken
 - (2) valve area calculated by pressure half time is fallacious in coexistent atrial septal defect
 - (3) associated mitral regurgitation does not affect continuity equation
 - (4) transvalvular gradient will be falsely low in bradycardia

25. For assessing severity of aortic stenosis clinically, which of the following is **less reliable** :

- (1) length of systolic murmur
- (2) intensity of systolic murmur
- (3) late peaking of murmur
- (4) S1 - ejection click interval

26. Which of the following facts about mitral valve is **wrong** :

- (1) The normal diameter of mitral annulus is 2.5-3.5 cms
- (2) There are 12 primary chordae
- (3) Anterior papillary muscle connects to medial aspects of leaflets
- (4) Normal mitral valve orifice is 4.0 sq.cm

27. Open mitral valvotomy for mitral stenosis is indicated in **all except** :

- (1) along with aortic valve replacement
- (2) large left atrial clot with pliable valve
- (3) with moderate mitral regurgitation
- (4) along with coronary artery bypass surgery

28. The following Echocardiographic features are suggestive of severe mitral regurgitation **except** :

- (1) Pulmonary vein systolic flow reversal.
- (2) Effective regurgitant orifice area more than 0.3 sq.cms
- (3) Regurgitant fraction more than 55%
- (4) Regurgitation jet reaches posterior wall of left atrium.

29. The following indicate functional MR **except** :

- (1) Mitral regurgitation jet is eccentric
- (2) Global or regional LV dysfunction is present.
- (3) Apical displacement of AML with tenting.
- (4) Mitral leaflets are not thickened.

30. Cardiac catheterization in rheumatic mitral regurgitation.

- (A) Routine cardiac catheterization is mandatory before mitral valve replacement in all patients.
- (B) Pre-operative coronary angiogram is mandatory before valve replacement in those with risk factors
- (C) LV angiogram helps to assess LV function and regional wall motion abnormalities.
- (D) Quantification of mitral regurgitation by catheterization is the gold standard

Which of this above is **correct**

- (1) A + B + C
- (2) B + C + D
- (3) A + D
- (4) B + C

31. The following are related to severity of mitral stenosis **except** :
- (1) atrial fibrillation
 - (2) length of diastolic murmur
 - (3) A2-OS interval
 - (4) Pulmonary hypertension
32. Which of the following facts about pericardium is **wrong** ?
- (1) receives arterial supply from internal mammary artery
 - (2) phrenic nerve supplies visceral pericardium
 - (3) visceral pericardium drains to tracheo bronchial lymphnodes
 - (4) prevents acute cavitory dilatation
33. Which of the following about Pericardial rub is **not correct** ?
- (1) is a phasic scratching sound
 - (2) increases on inspiration
 - (3) always has three components
 - (4) best audible in lower left parasternal region
34. Which of the following about cardiac tamponade is **incorrect** ?
- (1) will result if 200 mL of pericardial fluid accumulates rapidly
 - (2) increased JVP with prominent "Y" descent
 - (3) pulses paradoxus is characteristic
 - (4) Echo shows early diastolic RV collapse
35. Which of the following hemodynamic aspects of constrictive pericarditis is **incorrect** ?
- (1) there is dissociation of intracardiac and intrathoracic pressures
 - (2) there is elevation of intracardiac diastolic pressures
 - (3) affects early filling phase of ventricles
 - (4) causes equalisation of diastolic pressures in all 4 chambers
36. Which of the following statements regarding Echo Features of cardiac tamponade is **incorrect** ?
- (1) Less than 50% inspiratory collapse of dilated Inferior vena cava
 - (2) increase by more than 25% of mitral E velocity during inspiration
 - (3) increase by more than 25% of tricuspid E velocity during inspiration
 - (4) Right ventricular diastolic collapse
37. In constrictive pericarditis, following hemodynamic changes occurs **except** :
- (1) Left ventricular pressure tracing shows square root sign
 - (2) equalization of diastolic pressures in all 4 chambers
 - (3) ventricular filling occurs only in early diastole
 - (4) jugular venous pressure is decreased

38. A 50 years old female has easy fatigability, significant weight loss and exertional dyspnoea of 4 months. On examination she has small lump in left breast, jugular venous pressure of 10cm above sternal angle and no cardiac murmurs. Chest X ray shows cardiomegaly with normal pulmonary parenchyma. Echocardiogram showed moderate pericardial effusion.
The **likely diagnosis** is :
- (1) Mesothelioma
 - (2) Carcinoma breast with metastasis
 - (3) Carcinoma uterus with metastasis
 - (4) Viral pericarditis
39. Which of the following is **incorrect** regarding systolic murmur of HOCM ?
- (1) increased by Valsalva manoeuvre
 - (2) increased by amyl nitrate inhalation
 - (3) decreases on standing
 - (4) decreases on elevation of legs
40. The following are poor prognostic indications in HOCM **except** :
- (1) Family history of sudden death
 - (2) LV outflow gradient of > 30mm at rest
 - (3) BP fall with exercise
 - (4) Supraventricular tachycardia on Holter
41. Which of the following regarding treatment of HOCM is **wrong** ?
- (1) DDD pacing is indicated when there is severe bradycardia due to beta - blockers
 - (2) In septal ablation, alcohol is percutaneously injected in to first septal branch of LAD
 - (3) Pacemaker implantation is routinely done after septal ablation
 - (4) Septal myectomy is done by transaortic approach
42. Which of the following echo findings **does not occur** in HOCM ?
- (1) SAM of mitral valve
 - (2) apical hypertrophy
 - (3) exaggerated IVS movement
 - (4) partial systolic closure of aortic valve
43. A 40 years old male presented with slowly progressive exertional breathlessness and ankle edema of 2 months duration. Neck veins are distended. Echocardiogram showed normal sized LV with EF of 60% with dilatation of both atria. Mild mitral and tricuspid regurgitation. The **likely diagnosis** is :
- (1) Dilated cardiomyopathy
 - (2) Restrictive cardiomyopathy
 - (3) Hypertrophic cardiomyopathy
 - (4) Myocarditis

44. A 35 years old female presents with repeated episodes of ventricular tachycardia. Gives history of flu like illness one week ago. ECG shows left bundle branch block with diffuse ST-T changes. Echocardiogram shows mild LV dilatation with severe LV dysfunction. The **likely diagnosis** is :
- (1) Restrictive cardiomyopathy (2) Myocarditis
(3) Dilated cardiomyopathy (4) All of above
45. A 20 years old male was admitted with exercise induced syncope. Clinical examination revealed no significant abnormalities. ECG showed T inversion in V1-V3. Holter study diagnosed episodes of nonsustained ventricular tachycardia with left bundle branch block configuration. The **likely diagnosis** is :
- (1) Viral myocarditis
(2) Arrhythmogenic RV cardiomyopathy
(3) Tachycardia induced cardiomyopathy
(4) None of the above
46. Which of the following about Acute Rheumatic Fever (ARF) is **not correct** ?
- (1) M protein of Group A Streptococci cross reacts with human heart tissue
(2) Important factor determining ARF is severity of immune response
(3) Incidence is between 0.3-3% of Streptococcal throat infections
(4) HLA DR2 antigen has been linked to Indian ARF patients
47. Which of the following regarding clinical aspects of rheumatic fever is **correct** ?
- (1) Rheumatic fever produces only pericarditis
(2) Mitral stenosis can occur in acute stage
(3) Aschoff bodies are characteristic of acute carditis
(4) Mac Callum's patch occurs in left atrium
48. Which of the following statements about investigations in acute rheumatic fever is **incorrect** ?
- (1) Both ESR and CRP are elevated (2) ESR is more useful in follow up
(3) ASO is elevated in chorea (4) PR prolongation is a feature of Carditis
49. Treatment of rheumatic fever is :
- (A) Penicillin need not be given if throat culture does not grow Streptococci
(B) Carditis with cardiac enlargement does not require bed rest
(C) Recommended dose of Aspirin is 100 mg/kg/day
(D) While tapering steroids salicylate is to be added
- Which of the above are **correct** ?
- (1) A + C (2) B + D (3) A + B (4) C + D

50. Which of the following is **incorrect** regarding Antistreptococcal vaccines ?
- (1) Vaccines against virulence factors do not protect against all serotypes
 - (2) Antibodies against N terminal of M protein provide long term immunity
 - (3) Antibodies produced by recombinant DNA technology may cross react with host antigens
 - (4) synthetic antibodies are linked to a carrier protein

51. Which one of the following is **incorrect** regarding rheumatic valvular heart disease ?
- (1) Involvement of pulmonary valve is unusual
 - (2) commissural fusion and subvalvular apparatus involvement is common
 - (3) Valvular regurgitation is uncommon in acute phase
 - (4) Stenotic complications occur in < 10 years in Indians

52. Erythema marginatum :

- (A) seen in 30% of patients with acute rheumatic fever
- (B) evanescent, nonpruritic, macular rash
- (C) never occurs on face
- (D) central erythema with serpiginous borders

Which of above statements are **correct** ?

- (1) A + C (2) B + D (3) B + C (4) C + D

53. Rheumatic arthritis :

- (A) is typically fleeting in character
- (B) does not involve cervical spine
- (C) usually does not extend beyond 6 weeks
- (D) affects small joints of hands

Which of the above statements are **correct** ?

- (1) A + C (2) B + D (3) A + B + C (4) B + C + D

54. Which of the following is **incorrect** regarding Sydenham's chorea ?

- (1) occurs many weeks after streptococcal sorethroat
- (2) manifest as quasipurposive involuntary movements
- (3) involves face and extremities
- (4) elevated serum ASO titre is diagnostic

55. Which of the following regarding Rheumatic carditis is **incorrect** ?
- (1) Is always pancarditis
 - (2) Established valvular heart disease develops in $\frac{2}{3}$ of cases
 - (3) Aortic regurgitation is more common than mitral regurgitation
 - (4) Apical mid diastolic murmur can occur in acute phase
56. Which of the following regarding pathophysiology of infective endocarditis is **incorrect** ?
- (1) Vegetations occur at the site of jet impact on the endocardium
 - (2) Embolic complications are unusual
 - (3) Immunological complications are common
 - (4) Treatment with antibiotics reduces the incidence of embolism
57. Which of the following regarding pathogenesis of infective endocarditis is **wrong** ?
- (1) Endocardial damage leads to non bacterial thrombotic endocarditis (NBTE)
 - (2) Bacteremia converts NBTE to infective endocarditis
 - (3) Staph. Aureus has surface adhesins
 - (4) Aerobic gram negative bacilli are resistant to serum complement
58. Which of the following is **incorrect** regarding clinical diagnosis of definite infective endocarditis ?
- (1) Two major criteria
 - (2) One major + three minor criteria
 - (3) Three minor criteria
 - (4) Five minor criteria
59. The following echocardiographic signs are major clinical criteria **except** :
- (1) new partial dehiscence of prosthetic valve
 - (2) new valvular regurgitation
 - (3) oscillating intracardiac mass on valve or supporting structures
 - (4) worsening of pre existing valvular stenosis
60. The following are embolic complication of infective endocarditis **except** :
- (1) Mycotic aneurysm
 - (2) conjunctival hemorrhage
 - (3) glomerulonephritis
 - (4) Janeway lesion

61. Which of the following is **incorrect** regarding neurological complications in infective endocarditis ?
- (1) Embolic stroke is most common
 - (2) Mycotic aneurysm can lead to intracranial hemorrhage
 - (3) large brain abscesses are common
 - (4) Usually occur with Staph aureus endocarditis
62. Among the following which is **inappropriate** for treating native valve endocarditis due to streptococcus viridans :
- (1) Aqueous penicillin 12-18 million Units in divided doses daily for 4 weeks
 - (2) Ceftriaxone 2g/od for 4 weeks
 - (3) Gentamicin 3mg/kg/day in divided doses for 2 weeks
 - (4) Vancomycin 30 mg/kg/day in two divided doses
63. The following are included as HACEK microorganisms **except** :
- (1) Haemophilus parainfluenzae
 - (2) Acinetobacter actinomysis
 - (3) Cardiobacterium hominis
 - (4) Kingella kingae
64. The following are the absolute indications for surgery in infective endocarditis **except** :
- (1) Unstable prosthesis due to paravalvular leak
 - (2) Endocarditis due to fungi
 - (3) Culture negative endocarditis with persisting fever of more than 10 days
 - (4) Valve dysfunction resulting in severe congestive cardiac failure
65. The following are **high risk** critical conditions for infective endocarditis :
- (1) Prosthetic heart valve
 - (2) Cardiac pacemaker
 - (3) Tetralogy of Fallot
 - (4) Aortic regurgitation
66. In mitral stenosis, transvalvular gradient depends on the following, **except** :
- (1) Size of valve orifice
 - (2) quantum of blood flow
 - (3) duration of diastole
 - (4) force of LV contraction
67. In Mitral stenosis, which of the following statements, is **incorrect** :
- (1) First sound may be muffled with nonpliable calcific valve
 - (2) opening snap indicates pliable valve
 - (3) length of diastolic murmur is inversely related to severity
 - (4) short A2OS interval indicates severe mitral stenosis

68. The following radiological signs indicate elevated pulmonary venous pressure **except** :
- (1) Equalization (2) Ground glass appearance
(3) Kerley "B" lines (4) Pleural effusion
69. In Rheumatic mitral regurgitation, Which of the above is **incorrect** :
- (1) Murmur radiates to axilla when AML is involved.
(2) Murmur radiates medially towards the base when PML is involved
(3) Soft S1
(4) Squatting does not alter the intensity of murmur
70. Echo features of severe mitral regurgitation include the following **except** :
- (1) LA sizes more than 5.5 cms
(2) LA end diastolic dimension is more than 7 cms.
(3) Colourflow area is more than 30% of LA size.
(4) 'E' wave velocity of more than 1.5mts/sec.
71. X-ray PA view in a patient with rheumatic mitral valve disease.
- (A) Aneurysmal LA dilatation indicates dominant stenosis
(B) Mitral annular calcification is visualised to the right of vertebral column.
(C) Mitralization of left cardiac border
(D) Peribronchial and perivascular haze
- Which of the above statements are **correct** ?
- (1) A + B (2) C + D (3) A + C (4) B + D
72. Severe mitral stenosis is defined as :
- (1) Mitral valve area MVA < 3.0 cm² (2) MVA < 2.0 cm²
(3) MVA < 1.5 cm² (4) MVA < 1.0 cm²
73. Which valvular lesion is most commonly seen in Ankylosing spondylitis ?
- (1) MS (2) AS
(3) AR (4) MR
74. In rheumatic mitral stenosis, which is **incorrect** :
- (1) mitral valve assumes fish mouth appearance
(2) during acute valvulitis, pin head vegetations develop at base of leaflets
(3) commissural fusion occurs
(4) chordal fusion results in secondary orifice

75. Which of the following statements about ECG changes in mitral stenosis is **wrong** ?
- (1) P mitral is the commonest finding
 - (2) QRS axis of less than 60° indicates mild to moderate mitral stenosis
 - (3) Poor R wave progression in precordial leads indicates associated other valvular lesion
 - (4) Right axis deviation indicates severe mitral stenosis
76. Which of the following statement is **wrong** ?
- (1) mitral valve replacement is indicated in tight mitral stenosis when valve is non pliable
 - (2) mechanical prosthetic valves are prone for valve thrombosis
 - (3) presence of atrial fibrillation is an indication for valve replacement since anticoagulation is anyhow required.
 - (4) Inadequately managed anticoagulation will lead to hemorrhagic complication
77. Which of the following statements about pericarditis is **wrong** ?
- (1) "Dresslers syndrome" occurs two weeks to two years after acute myocardial infarction
 - (2) occurs 6-8 weeks after cardiac surgery
 - (3) acute pericarditis in acute MI, has decreased in view of widespread use of reperfusion therapy
 - (4) none of the above
78. ECG in Pericarditis - which of the following is **incorrect** :
- (1) PR depression in lead II and lateral chest leads
 - (2) ST segment elevation with convexity upwards
 - (3) All leads except a VR show ST elevation
 - (4) upright T flattens after few days
79. Which of the following regarding Constrictive pericarditis is **wrong** ?
- (1) commonly caused by tuberculous pericarditis
 - (2) can complicate rheumatoid arthritis
 - (3) can follow radiation
 - (4) interferes with left ventricular systolic performance

80. Among the following clinical signs of constrictive pericarditis, which is **correct** :
- (1) In jugular venous pulse "Y" descent is prominent
 - (2) Jugular venous pressure increases during expiration
 - (3) Pericardial knock is heard during early systole
 - (4) ascitis is a late manifestation
81. Following are the clinical signs of cardiac tamponade **except** :
- (1) Pulsus paradoxus
 - (2) elevated JVP with hypotension
 - (3) prominent Y descent in jugular venous tracing
 - (4) tachycardia
82. Which of the following is **incorrect** regarding constrictive pericarditis ?
- (1) There is dissociation of intracardiac and intrathoracic pressures
 - (2) elevation of diastolic intracardiac pressures occur
 - (3) systemic and pulmonary venous congestion
 - (4) interference in early diastolic filling of ventricle
83. Which of the following clinical signs of constrictive pericarditis is **less common**
- (1) Kussmaul's sign
 - (2) Friedrich's sign
 - (3) Pericardial knock
 - (4) Irregular irregular pulse
84. A 20 years old male presented with sudden syncope. Auscultation of heart revealed grade $\frac{3}{6}$ ejection systolic murmur along left sternal border. There was no ejection click or conduction to carotids. Aortic component of second sound was normal and there was no diastolic murmur. The **likely diagnosis** is :
- (1) Rheumatic aortic stenosis
 - (2) HOCM
 - (3) Bicuspid aortic valve
 - (4) Subvalvular aortic stenosis
85. In HOCM which of the following statement is **correct** :
- (1) Verapamil in asymptomatic patients prevents progression of disease
 - (2) Combination of disopyramide with beta-blocker reduces outflow gradient
 - (3) Beta-blockers improve exercise tolerance better than Verapamil
 - (4) Verapamil does not improve diastolic dysfunction

86. Which of the following ECG change is **less common** in HOCM :
- (1) Psuedoinfarction Q wave
 - (2) WPW syndrome
 - (3) Symmetrical T wave inversion
 - (4) Paroxysmal supraventricular tachycardia
87. The following are true in dilated cardiomyopathy **except** :
- (1) Intraventricular conduction defects
 - (2) Poor R wave progression in precordial leads
 - (3) Global hypokinesia of LV in echo
 - (4) LV hypertrophy
88. A 70 years old male presents with pedal edema, elevated JVP and moderate hepatomegaly. Heart sounds are normal with no murmur. Chest X ray shows normal heart size. 12 lead ECG shows diffuse low voltage and Q waves in leads V1-V3. Echocardiogram shows biatrial enlargement, IVS thickness of 18mm, normal LV dimensions and no regional wall motion abnormality. The next step in evaluation should be :
- (1) Endomyocardial biopsy
 - (2) Myocardial perfusion scan
 - (3) Abdominal fat aspiration biopsy
 - (4) Coronary angiogram
89. The following ECG findings can occur in myocarditis **except** :
- (1) Left ventricular hypertrophy
 - (2) Pathological Q wave
 - (3) QTc
 - (4) Left bundle branch block
90. A middle aged woman presents with progressive exertional dyspnoea and ankle edema of 3 months duration. On examination, JVP is increased, irregularly irregular pulses with tender hepatomegaly. Echocardiogram showed significant biatrial enlargement, normal LV size and function and no pericardial thickening. The **likely diagnosis** is :
- (1) Restrictive cardiomyopathy
 - (2) Dilated cardiomyopathy
 - (3) Constrictive pericarditis
 - (4) Viral myocarditis