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MCC-004

POST GRADUATE DIPLOMA IN CLINICAL CARDIOLOGY (PGDCC)

00283

Term-End Examination

June, 2014

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 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. The leucocyte antigen linked to Acute Rheumatic Fever (ARF) in Indian patients is

   (1) HLA DR_1

   (2) HLA DR_2

   (3) HLA DR_3

   (4) HLA DR_4

2. In chorea, antibodies directed against GAS cell membrane cross react with tissues in

   (1) Cortex

   (2) Thalamus

   (3) Hypothalamus

   (4) Caudate nucleus

3. The pathologic hallmark of rheumatic carditis is

   (1) Aschoff body

   (2) Giant cells

   (3) Lipid laden macrophage

   (4) Eosinophilic infiltration

4. The carditis in ARF occurs in

   (1) 40% of cases

   (2) 50% of cases

   (3) 60% of cases

   (4) 70% of cases

5. The most common manifestation of ARF is

   (1) Carditis

   (2) Poly arthritis

   (3) Subcutaneous modules

   (4) Chorea

6. Of the major criteria for Acute Rheumatic Fever, the least common is

(1) Chorea

(2) Carditis

(3) Subcutaneous nodules

(4) Erythema marginatum

7. If ASO titre is negative and ARF is a strong possibility, the other streptococcal antibody to be tested is

(1) Anti-deoxyribonuclease-B

(2) Anti-hyaluronidase

(3) Anti-streptokinase

(4) Anti-nicotinamide adenosine dinucleotidase

8. In ARF patients ASO titre will be elevated in

(1) 60%

(2) 70%

(3) 80%

(4) 90%

9. The commonest organism causing subacute infective endocarditis is

(1) *Streptococcus viridans*

(2) *Enterococci*

(3) *Staphylococcus aureus*

(4) *Staphylococcus epidermidis*

10. In neonates, the valve most commonly affected in infective endocarditis is

(1) Mitral valve

(2) Tricuspid valve

(3) Aortic valve

(4) Pulmonary valve

11. The commonest valve affection with IE in IV drug abusers is

(1) Mitral valve

(2) Tricuspid valve

(3) Aortic valve

(4) Pulmonary valve

12. The prosthetic valve endocarditis is considered "early" when the symptoms begin after valve surgery within

(1) 3 months

(2) 1 month

(3) 4 months

(4) 2 months

13. The commonest fungus causing PVE is

(1) Aspergillus

(2) Candida albicans

(3) Actinomycosis

(4) Yeast

14. The incidence of embolic stroke in IE is

(1) 15 – 20%

(2) 20 – 30%

(3) 30 – 35%

(4) 40 – 45%

15. In the Duke's criteria for the diagnosis of IE (modified) following are major criteria *except*

(1) Valve vegetation in echocardiogram

(2) Prosthetic valve dehiscence

(3) Positive blood culture

(4) Janeway lesions

16. The sensitivity of Transesophageal Echocardiography for detecting vegetation in Native Valve Endocarditis is

(1) 75 – 85%

(2) 90 – 100%

(3) 80 – 90%

(4) 60 – 70%

17. The sensitivity for abscess detection in IE by Transthoracic Echocardiography is

(1) 98%

(2) 28%

(3) 95%

(4) 38%

18. The best antibiotic for IE of native valve due to *streptococcus viridans* is

(1) Crystalline Penicillin

(2) Erythromycin

(3) Vancomycin

(4) Gentamycin

19. On echocardiographic follow up, infective endocarditis vegetation can disappear in

(1) 29%

(2) 59%

(3) 24%

(4) 17%

20. Following are complications of infective endocarditis *except*

(1) Regurgitation lesions

(2) Congestive heart failure

(3) Renal failure

(4) Stenotic lesions

21. Overall mortality of Native Valve infective endocarditis is

(1) 16 – 27%

(2) 50 – 60%

(3) 5 – 10%

(4) 20 – 30%

22. In infective endocarditis the intracranial mycotic aneurysm occurs in

(1) 1·2 – 5%

(2) 5 – 10%

(3) 10·5 – 15%

(4) 0 – 1%

23. The total area of mitral leaflets in comparison to mitral annulus is

(1) More than double

(2) Three times

(3) Equal

(4) Four times

24. Mitral Valve has following number of primary chordae

(1) 22

(2) 12

(3) 18

(4) 14

25. Mitral stenosis is considered severe if echocardiographic mitral orifice area is less than

(1) 0·5 cm^2

(2) 0·7 cm^2

(3) 1 cm^2

(4) 1·2 cm^2

26. By M-mode echocardiography mitral stenosis can be diagnosed by

(1) Prominent 'a' wave

(2) Decreased EF slop

(3) Increased posterior leaflet excursion

(4) Absent 'a' waves

27. By cardiac catheterization, the end diastolic gradient across the mitral valve to diagnose mitral stenosis is

(1) 10 mm of Hg

(2) 2 mm of Hg

(3) 5 mm of Hg

(4) 8 mm of Hg

28. The parameters of the mitral valve assessed by echocardiography for scoring prior to mitral balloon valvuloplasty are the following *except*

(1) Mobility

(2) Subvalvular thickening

(3) Mitral orifice size

(4) Calcification

29. The complications of mitral stenosis are the following *except*

(1) Acute left ventricular failure

(2) Right heart failure

(3) Atrial fibrillation

(4) Haemoptysis

30. The 10-year mortality of symptomatic mitral stenosis patients is

(1) 30 – 40%

(2) 40 – 50%

(3) 50 – 60%

(4) 70 – 80%

31. In severe mitral regurgitation due to valvular pathology, the second heart sound can be

(1) Widely split

(2) Paradoxically split

(3) Single

(4) Normal split

32. The 10-year survival for severe mitral regurgitation is

(1) 50 – 60%

(2) 30 – 50%

(3) 60 – 70%

(4) 70 – 80%

33. The severe aortic stenosis patients have a valve area of

(1) $< 0{\cdot}5\ cm^2$

(2) $< 0{\cdot}8\ cm^2$

(3) $< 1{\cdot}0\ cm^2$

(4) $< 1{\cdot}5\ cm^2$

34. In patients with degenerative aortic valve stenosis, yearly increase in gradient across the aortic valve is

(1) 10 – 15 mm of Hg

(2) 5 – 8 mm of Hg

(3) 12 – 20 mm of Hg

(4) 0 – 5 mm of Hg

35. In patients with severe aortic stenosis the second heart sound can have

(1) Fixed split

(2) Wide split

(3) Paradoxical split

(4) Normal split

36. The typical ECG abnormality in severe aortic stenosis is

(1) Right ventricular hypertrophy

(2) Left ventricular hypertrophy with pressure overload pattern

(3) Left ventricular hypertrophy with volume overload pattern

(4) Normal ECG

37. The peak flow velocity across the aortic valve for the diagnosis of severe aortic stenosis is

(1) ≥ 4 m/sec

(2) ≥ 5 m/sec

(3) ≥ 3 m/sec

(4) ≥ 6 m/sec

38. Cardiac Catheterisation in patients with severe aortic stenosis is done for the following *except*

(1) To assess presence of Coronary Artery Disease

(2) When non-invasive tests are inconclusive

(3) To assess LV function

(4) Discrepancy between clinical evaluation and echocardiographic finding

39. Transcatheter Aortic Valve implantation is done for patients of aortic stenosis in the following situation

(1) Young patients

(2) Rheumatic Aortic stenosis

(3) Mild aortic stenosis

(4) Elderly patients of severe aortic stenosis with high risk for surgical treatment

40. Severe Aortic Regurgitation can be diagnosed by regurgitant jet area/LVOT area, if the value is

(1) $\geq 40\%$

(2) $\geq 80\%$

(3) $\geq 60\%$

(4) $\geq 30\%$

41. In aortic regurgitation valve replacement is indicated under following situations *except*

(1) LVEF < 50%

(2) LVED diameter ≥ 75 mm

(3) LVES diameter ≥ 45 mm

(4) Symptomatic patients

42. In severe tricuspid regurgitation the clinical findings are the following *except*

(1) Prominent 'v' wave in JVP

(2) Prominent 'a' wave in JVP

(3) Pulsatile liver

(4) Sharp 'Y' collapse

43. The echocardiographic features of cardiac tamponade are the following *except*

(1) Right ventricular diastolic collapse

(2) Right atrial diastolic collapse

(3) Left ventricular diastolic collapse

(4) Swinging heart motion

44. Endomyocardial fibrosis is a form of

(1) Hypertrophic cardiomyopathy

(2) Restrictive cardiomyopathy

(3) Dilated cardiomyopathy

(4) Congenital heart disease

45. Indications of bad prognosis in hypertrophic cardiomyopathy are the following *except*

(1) History of sudden death in the family members

(2) Severe Left ventricular hypertrophy of > 33 mm

(3) Late onset of disease

(4) High degree of myocardial disarray

46. In children, the ASO titre level in Acute Rheumatic Fever will be

(1) > 333 Todd units

(2) > 250 Todd units

(3) > 200 Todd units

(4) > 100 Todd units

47. ARF patients with carditis show infiltration by mononuclear phagocytes expressing

(1) Raised B cell levels

(2) CD_4/CD_8 cell ratio

(3) CD_3/CD_4 marker proteins

(4) Increase in C_3, C_4 complements

48. In ARF vasculitis is responsible for the following lesions *except*

(1) Chorea

(2) Pulmonary lesions

(3) Renal lesions

(4) Arthritis

49. The percentage of patients presenting with Rheumatic Heart Disease in patients who had carditis during ARF is

(1) 80%

(2) 75%

(3) 66%

(4) 50%

50. The late manifestation of ARF is

(1) Carditis

(2) Chorea

(3) Erythema marginatum

(4) Subcutaneous modules

51. The time taken for ASO titre to return to normal in ARF is

(1) 10 – 12 weeks

(2) 4 – 6 months

(3) 2 – 3 months

(4) 2 – 4 weeks

52. Positive throat culture for Group A beta-haemolytic streptococcus in ARF patients is

(1) 15%

(2) 20%

(3) 11%

(4) 13%

53. Best agent for secondary prophylaxis in ARF is

(1) I.M. Benzathine Penicillin G

(2) Oral penicillin V

(3) Sulfadiazine

(4) Erythromycin

54. The commonest organism causing Acute Infective Endocarditis is

(1) *Streptococcus viridans*

(2) *Enterococci*

(3) *Staphylococcus aureus*

(4) *Staphylococcus epidermidis*

55. In developing countries IE is most frequently seen in

(1) Rheumatic heart disease

(2) Congenital heart disease

(3) Mitral valve prolapse

(4) Calcitic Aortic stenosis

56. The greatest risk of prosthetic valve endocarditis is

(1) 1 – 2 years later

(2) 2 – 3 years later

(3) during the initial 6 months

(4) After 5 years

57. The enterococci account for infective endocarditis of native valve in the following percentage of patients :

(1) 5 – 15%

(2) 15 – 25%

(3) 25 – 35%

(4) 35 – 45%

58. Janeway lesions in IE are seen in the following area :

(1) Retina

(2) Pulp of finger

(3) Back

(4) Palms and soles

59. Intracranical haemorrhage due to rupture of a mycotic aneurysm in patients of IE occurs in

(1) 10%

(2) 5%

(3) 8%

(4) 12%

60. According to Duke's Criteria (modified) IE can be diagnosed if the following are satisfied *except*

(1) Two major criteria

(2) One major and three minor criteria

(3) Five minor criteria

(4) One major and two minor criteria

61. The sensitivity of Transesophageal Echocardiography for detecting vegetation in prosthetic valve Endocarditis is as follows :

(1) 80 – 96%

(2) 75 – 85%

(3) 70 – 80%

(4) 90 – 100%

62. The sensitivity for abscess detection in IE by Transesophageal Echocardiography is

(1) 87%

(2) 95%

(3) 38%

(4) 28%

63. For culture negative native valve IE, the antibiotic combination to start treatment is

(1) Crystalline Penicillin + Gentamycin

(2) Oxacillin + Gentamycin

(3) Ampicillin + Gentamycin

(4) Ampicillin + Erythromycin

64. The most important arrhythmia due to infective endocarditis is

(1) Ventricular tachycardia

(2) Supraventricular tachycardia

(3) New onset heart block

(4) Atrial flutter

65. Following are indications for surgery in IE *except*

(1) Severe heart failure

(2) Unstable prosthesis

(3) Uncontrolled infection

(4) One embolic episode

66. Treated Native Valve Endocarditis survival at 10 years is

(1) 60%

(2) 81%

(3) 72%

(4) 68%

67. The mortality in Early Prosthetic Valve Endocarditis is

(1) 20 – 30%

(2) 40 – 50%

(3) 50 – 60%

(4) 60 – 70%

68. The circumference of mitral annulus is

(1) 3 – 4 cm

(2) 8 – 9 cm

(3) 4 – 5 cm

(4) 6 – 7 cm

69. In mitral stenosis short A_2 - OS interval indicates

(1) Severe MS

(2) Mild MS

(3) Associated Mitral Regurgitation

(4) LV diastolic dysfunction

70. In patients of mitral stenosis with pulmonary arterial hypertension and tricuspid regurgitation the prominent wave in JVP will be

(1) 'a' wave

(2) 'v' wave

(3) 'x' descend

(4) 'y' descend

71. In a patient with mitral orifice of 1 cm^2, the pressure halftime will be

(1) 220 m sec

(2) 300 m sec

(3) 200 m sec

(4) 240 m sec

72. In patients with Atrial Fibrillation, the drugs useful to control the ventricular rate are the following *except*

(1) Beta blockers

(2) Digoxin

(3) Verapamil

(4) Amlodipine

73. The surgical treatment available for mitral stenosis are the following

(1) Closed mitral valvotomy

(2) Open mitral valvotomy

(3) Mitral valve replacement

(4) Mitral valve repair

74. Mitral orifice size for uncomplicated pregnancy and delivery is

(1) > 2·5 cm^2

(2) > 1·3 cm^2

(3) > 1·0 cm^2

(4) > 2·0 cm^2

75. Mitral regurgitation can occur in all the following *except*

(1) Mitral annulus calcification

(2) Marphani syndrome

(3) Syphilitic heart disease

(4) Radiation therapy

76. Severe mitral regurgitation by 2D Echocardiography can be diagnosed by the following criteria *except*

(1) Pulmonary vein systolic flow reversal

(2) The effective regurgitant orifice is ≥ 30 mm^2

(3) Regurgitant fraction $\geq 55\%$

(4) Mitral regurgitation volume > 60 cc

77. The incidence of congenital bicuspid aortic valve in the population is

(1) 5%

(2) 10%

(3) 4%

(4) 2%

78. The average rate of decrease in area of aortic valve per year in a patient of degenerative aortic stenosis is

(1) 0·12 cm^2

(2) 0·08 cm^2

(3) 0·18 cm^2

(4) 0·2 cm^2

79. The important symptoms of severe aortic stenosis are the following *except*

(1) Angina

(2) Syncope

(3) Dyspnoea

(4) Palpitation

80. The selective conduction of high frequency sound of aortic stenosis murmur to apex is known as

(1) Austin flint murmur

(2) Graham Steell murmur

(3) Gallavardin phenomenon

(4) Carey Coombs murmur

81. In a patient with severe Aortic stenosis the LVOT/AV Velocity Time integral will be

(1) < 1

(2) < 0·5

(3) < 0·4

(4) < 0·25

82. The mean pressure gradient across the aortic valve by Doppler measurement for the diagnosis of severe aortic stenosis is

(1) > 60 mm of Hg

(2) > 70 mm of Hg

(3) > 50 mm of Hg

(4) > 30 mm of Hg

83. Balloon aortic valvuloplasty can be carried out in patients of severe aortic stenosis for

(1) Rheumatic aortic stenosis

(2) Calcific aortic stenosis

(3) Congenital non-calcific aortic stenosis in children

(4) Contra indicated

84. In patients of Low Gradient Aortic stenosis due to severe aortic stenosis with LV dysfunction can be evaluated by

(1) Dobutamine stress Echo

(2) Fluid challenge

(3) Contrast Echo

(4) Dipyridamole stress Echo

85. The average mortality rate of severe Aortic stenosis per year is

(1) 0·4%

(2) 0·8%

(3) 0·2%

(4) 0·1%

86. Transcupid stenosis is considered severe if the mean gradient across the valve is

(1) ≥ 7 mm of Hg

(2) ≥ 5 mm of Hg

(3) ≥ 10 mm of Hg

(4) ≥ 12 mm of Hg

87. Classical ECG abnormality in acute pericarditis is

(1) ST elevation with convexity upwards

(2) ST elevation with reciprocal changes

(3) ST elevation in all leads *except* aVR without reciprocal changes

(4) No ST change

88. The JVP pattern in constrictive pericarditis are the following *except*

(1) Inspiratory engorgement

(2) Prominent 'v' descent

(3) Prominent 'x' descent

(4) Elevated JVP

89. The murmur of hypertrophic cardiomyopathy increases under following condition *except*

(1) Valsalva manoeuvre

(2) Squatting

(3) Post extrasystole

(4) Exercise

90. Interventional treatment for hypertrophic cardiomyopathy is

(1) Angioplasty

(2) Device closure

(3) Septal ablation

(4) Valvuloplasty

SPACE FOR ROUGH WORK