

POST GRADUATE DIPLOMA IN CLINICAL  
CARDIOLOGY (PGDCC)

00553

Term-End Examination

June, 2009

MCC-006 : CARDIOVASCULAR EPIDEMIOLOGY

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 Sheet.
- (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 Sheet.
- (iv) If any candidate marks more than one options it will be taken as the wrong answer and no marks will be awarded for this.
- (v) Erase completely any error or unintended marks.
- (vi) There will be 60 questions in this paper and each question carries equal marks.
- (vii) There will be no negative marking for wrong answers.
- (viii) No candidate shall leave the examination hall at least for one hour after the commencement of the examination.

1. The most important cardiovascular disease leading to death and disability is :
  - (1) Hypertension
  - (2) Rheumatic Heart Disease
  - (3) Cardiomyopathy
  - (4) Atherosclerotic diseases of CVS
2. According to the GBD (Global Burden of Disease) 2000 study which is the commonest cause of death in developing countries :
  - (1) Cerebrovascular
  - (2) Ischemic heart disease
  - (3) HIV/AIDS
  - (4) Road Traffic accidents
3. The disturbing features of CAD in South Asians include all of the following except :
  - (1) More severe and extensive disease
  - (2) Higher mortality in older Asian Indians
  - (3) Prematurity
  - (4) None of above
4. Which of the following is *not correct* regarding CAD in Indians ?
  - (1) The prevalence of CAD among native Indians is high but less than that among immigrant Indians
  - (2) There is definite urban - rural difference in disease prevalence
  - (3) There is likelihood of north - south divide with prevalence higher in South Indians
  - (4) The propensity for premature, severe and extensive lesions is not applicable for the resident Indians
5. According to the latest school survey done in primary school children 6 - 10 years of age, what is prevalence of RHD in India ?
  - (1) 1.5 / 1000
  - (2) 2.5 / 1000
  - (3) 3.9 / 1000
  - (4) 6 / 1000
6. "Atheroma" in medium and large sized vessel is seen usually around the age of :
  - (1) 15 - 20 yrs.
  - (2) 30 - 40 yrs.
  - (3) 40 - 50 yrs.
  - (4) Above 60 yrs.
7. Which of the following is a "Causal" risk factor for CAD ?
  - (1) High Serum Cholesterol
  - (2) High triglycerides
  - (3) Male sex
  - (4) Age
8. Which of the following is a "Conditional" risk factor for CAD ?
  - (1) High serum cholesterol
  - (2) High serum triglycerides
  - (3) Male sex
  - (4) Age
9. All the following are non-modifiable risk factor for CAD *except* :
  - (1) Age
  - (2) Sex
  - (3) Heredity
  - (4) Dyslipidemia
10. Obesity is defined as increase in body weight over the ideal body weight by :
  - (1) 10%
  - (2) 20%
  - (3) 30%
  - (4) 40%

11. Which of the following drugs are used for "*Chemo-prevention*" of atherosclerotic CVD ?  
 (1) Beta-blockers (2) Statins (3) ACE inhibitors (4) All of above
12. Which of the following food item has low glycemic index ?  
 (1) White bread (2) White rusk (3) Whole wheat (4) Potatoes
13. Which of the following items of diet has high glycemic index ?  
 (1) Whole fruits (2) French fries  
 (3) Whole grain breakfast cereals (4) Oats
14. Corn, sunflower and soyabean oils are rich in :  
 (1) Monounsaturated fat (2) Poly unsaturated fat  
 (3) Saturated fat (4) Trans fat
15. The following dietary items are rich in Trans fats except :  
 (1) Margarines (2) Partially hydrogenated vegetable oil  
 (3) Deep fried chips (4) Whole milk
16. Which of the following is rich in Mono unsaturated fats ?  
 (1) Corn (2) Soyabean (3) Fish (4) Almonds
17. Which of the following drugs is used for primary prevention of CAD ?  
 (1) Aspirin (2) ACE inhibitors (3) Betablockers (4) Statins
18. The mechanism of atheroma formation is thought to be related to :  
 (1) Damage to inner lining blood vessels  
 (2) Changes in blood lipid  
 (3) Combinations of both  
 (4) None of above
19. Which of the following is *not* a non-modifiable risk factors for CAD ?  
 (1) Metabolic syndrome (2) Heredity  
 (3) Gender (4) Age
20. Which of the following is a personal risk factor for CAD ?  
 (1) Age (2) Gender (3) Family history (4) All of above
21. Which of the following is *not* correct regarding coronary artery disease in patients with diabetes mellitus ?  
 (1) Diabetic subjects have more severe CAD  
 (2) They have more extensive coronary calcification  
 (3) They have higher prevalence of left main stem disease  
 (4) They have increased coronary collaterals recruitment

22. All are correct about  $L_p(a)$ , except :
- (1) It is a sub fraction of IDL
  - (2) It is ten times more atherogenesis
  - (3) Its serum level is genetically determined
  - (4) It is a powerful independent risk factor for premature and extensive CAD
23. All are features of metabolic syndrome except :
- (1) Waist circumference > 94 cm in men and > 80 cm in women
  - (2) Triglyceride levels < 150 mg/dL
  - (3) HDL cholesterol level < 40 mg/dL
  - (4) Fasting plasma glucose level > 100 mg/dL
24. In the prevention of CAD :
- (1) Antiplatelet agents are found to be beneficial
  - (2) Supplementation with vitamin B12 and folic acid are beneficial
  - (3) Intake of vitamin E, C and A do not have protective effect
  - (4) Aspirin and Statin are beneficial
25. Which of the following organisms appears to be most plausible candidate for initiating and modulating the atherosclerotic process ?
- (1) Chlamydia pneumoniae
  - (2) Helicobacter pylori
  - (3) Herpes simplex
  - (4) Cytomegalovirus
26. In men aged 30 - 39 years, 98% have the 10 year risk of CAD :
- (1) Less than 10%
  - (2) 10 - 20%
  - (3) 20 - 30%
  - (4) More than 30%
27. The recent trend in increasing the incidence of CAD in premenopausal year is related to which factor in women :
- (1) Rising smoking habit
  - (2) Using of oral contraceptives
  - (3) Stressful life of situation
  - (4) All of above
28. Which of the following is correct ?
- (1) The mortality is relatively low among women after heart attack
  - (2) Very elderly women with heart attack have lower mortality rate
  - (3) After Coronary artery bypass surgery women have 3 times low risk of dying during or before surgery
  - (4) All are correct
29. Which of the following is a more useful marker of familial vulnerability to CAD event ?
- (1) Family history of CAD at an early age (less than 55 yrs in male and less than 65 yrs in female)
  - (2) History of CAD in primary relatives like parents
  - (3) CVD in sibilings
  - (4) Children born to families with a high prevalence of risk factor for CAD

30. Which is *not* correct regarding Trans fats ?
- (1) Increase LDL cholesterol                      (2) Increase HDL cholesterol  
 (3) Raise of triglyceride level                      (4) Promote platelet aggregation thrombosis
31. Animal protein in diet contribute atherosclerosis by :
- (1) Increasing LDL cholesterol                      (2) Increasing homocystein level  
 (3) Reducing HDL cholesterol                      (4) By inducing endothelial dysfunction
32. CAD morbidity and mortality in a smoker is related to :
- (1) Amount of smoked tobacco daily                      (2) Duration of smoking  
 (3) Both (1) and (2)                      (4) None of the above
33. Which of the following statement is *not* correct regarding cigarette smoking and CAD ?
- (1) Smoking is single most preventable risk factor for CAD  
 (2) Smokers have twice the risk of CAD as non-smokers.  
 (3) Different form of non smoke tobaccos are not so harmful  
 (4) The benefits of smoking cessation are seen regardless of how long and how much the patient previously smoked.
34. The effect of stress in causation of CAD is mediated through :
- (1) Stress hormone like adrenaline and non-adrenaline  
 (2) Cortisol  
 (3) Renin and Aldosterone  
 (4) All of the above
35. The mechanism by which 'Type A' personality influenced atherogenesis :
- (1) by altering the lipid profile  
 (2) by increasing the incidence of diabetes mellitus  
 (3) by increasing receptor density leading to increased peripheral alphareceptor activity  
 (4) Increase steroid hormone
36. The ideal goal of blood pressure appropriate for primary and secondary prevention of :
- (1) less than 140/90 mm Hg                      (2) less than 130/85 mm Hg  
 (3) less than 120/80 mm Hg                      (4) less than 110/60 mm Hg
37. The ratio of total cholesterol (TC) to HDL Cholesterol (HDLc) which is most powerful predictor of atherosclerosis :
- (1) TC/HDLc ratio more than 3                      (2) TC/HDLc ratio more than 3.5  
 (3) TC/HDLc ratio more than 4.5                      (4) TC/HDLc ratio more than 5
38. What is the prevalence of CAD in general population ?
- (1) 2 - 4%                      (2) 1 - 2%                      (3) 4 - 6%                      (4) 8 - 10%



48. Which of the following statement is "Incorrect" ?
- (1) Co-existence of multiple risk factors confers a magnified risk for CAD
  - (2) The various risk factors in a given patient works synergistically to increase the CAD risk and mortality in an exponential manner
  - (3) A smoker with modest elevation of cholesterol and BP is at same risk of coronary death as a nonsmoker with severe hypertension and marked hypercholesterolemia
  - (4) A single risk factor is not sufficiently sensitive to identify all individuals at high risk of CAD.
49. Which statement is "Correct" regarding risk factors interaction in CAD ?
- (1) Co-existence of multiple risk factors and its effect in a given patient is multiplicative rather than additive.
  - (2) A single risk factor is not sufficiently sensitive to identify an individual at high risk of CAD
  - (3) The bulk of CAD occurs in individuals with only moderate elevations of the number of risk factors rather than those who lie at the upper end of a single risk factor.
  - (4) All are correct.
50. Relative risk of CAD is :
- (1) Ratio of the likelihood of CAD developing in person with and without risk factor
  - (2) The probability of developing CAD in future
  - (3) Both of the above
  - (4) None of the above
51. A young person with high serum cholesterol level carries :
- (1) A low absolute risk of CAD
  - (2) A high absolute risk of CAD
  - (3) A high relative risk compared to another young man with low serum cholesterol
  - (4) (1) + (3)
52. Which is "correct" regarding the strategy for prevention of heart disease ?
- (1) A large number of people at small risk may give rise to more cases than a small number of people at high risk.
  - (2) All policy decisions should be based on absolute measures of risk of CAD
  - (3) All policy decision should be based on relative risk of CAD in population
  - (4) (1) + (2)
53. What percentage of patients with acute MI die within hours if they do not get immediate medical attention ?
- (1) 10 - 15%                      (2) 15 - 20%                      (3) 20 - 25%                      (4) 30 - 40%

54. The most effective strategy for prevention of CAD in community is :
- (1) Primordial prevention
  - (2) Primary prevention
  - (3) Secondary prevention
  - (4) All of the above strategy to be applied collectively
55. When the major risk factors like smoking or faulty diet habits are not allowed to take root in otherwise healthy community, who are free of risk factors, this strategy is :
- (1) a Primordial prevention
  - (2) a primary prevention
  - (3) a Secondary prevention
  - (4) a Chemo-prevention
56. Treatment of people with an increased risk of coronary heart disease or cardiovascular disease falls under which of the following preventive strategy ?
- (1) Population health strategy
  - (2) Single raised risk factor strategy
  - (3) High baseline risk strategy
  - (4) None of the above
57. The sustainable strategy for reducing the burden of coronary heart disease at community or global level is :
- (1) Population based prevention
  - (2) Single raised risk factor strategy
  - (3) High baseline risk strategy
  - (4) All of above
58. Lifestyle modification for prevention of CAD includes all "except" :
- (1) Changes in diet and stoppage of smoking
  - (2) Encouragement of physical activity
  - (3) Behavioral change for stress management
  - (4) Use of Statins and Aspirin
59. Most widely recommended and used drug for prevention of CAD is :
- (1) Statins
  - (2) Beta-blockers
  - (3) Aspirin
  - (4) ACE inhibitors
60. Which of the following is rich source of saturated fats ?
- (1) Palm oil
  - (2) Olive oil
  - (3) Canola oil
  - (4) Peanut oil

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