

## ASSESSMENT OF 30 MCQs

**FPSC NO : 45**  
**MCQs on CARDIOMETABOLIC RISK UPDATE**  
**Submission DEADLINE: 2 December 2011**

**INSTRUCTIONS**

- To submit answers to the following multiple choice questions, you are required to log on to the College On-line Portal ([www.cfps2online.org](http://www.cfps2online.org)).
- Attempt ALL the following multiple choice questions.
- There is only ONE correct answer for each question.
- The answers should be submitted to the College of Family Physicians Singapore via the College On-line Portal before the submission deadline stated above.

1. In 2009, cardiometabolic diseases accounted for X% of the total deaths of 17,101 in Singapore. What is X?
  - A. 28.9.
  - B. 30.9.
  - C. 32.9.
  - D. 34.9.
  - E. 36.9.
2. About the terms related to cardiometabolic diseases, which of the following statement is CORRECT?
  - A. "Metabolic syndrome" is specific subset of "cardiometabolic risks" that when clustered together increase overall lifetime cardiovascular risks by 3 fold.
  - B. "Global cardiometabolic risk" represents the comprehensive catalogue of factors that contribute to the development of both cardiovascular disease (CVD) and Type 2 diabetes.
  - C. "Risk assessment" describes the relative cardiovascular risk of the patient with regards to cardiometabolic disease
  - D. "Metabolic syndrome" is a cluster of 5 diseases namely cardiovascular disease, cerebrovascular disease, peripheral arterial disease, chronic renal disease, diabetic retinopathy.
  - E. "Global cardiometabolic risk" quantifies the risk of cardiometabolic disease in absolute terms.
3. In younger men with erectile dysfunction, the Framingham risk assessment has X sensitivity with regards to cardiovascular risk. What is X?
  - A. Good.
  - B. Fairly good.
  - C. Inadequate.
  - D. Poor.
  - E. Excellent.
4. Miss Tan aged 27 is diagnosed to have polycystic ovary syndrome. Which of the following is likely to be present?
  - A. Pregnancy
  - B. Alopecia.
  - C. Downy hair on the face.
  - D. Hyperandrogenism.
  - E. Bipolar disorder.
5. A 30-year-old man is on antipsychotic medications and he has put on 10 kg since starting on the medications. Which of the following would result in the greatest weight loss?
  - A. Thyroxine.
  - B. Glipzide
  - C. Niacin.
  - D. Orlistat.
  - E. Metformin.
6. In the pharmacological treatment of a patient with mixed dyslipidaemia to reduce cardiovascular mortality, which of the following statement is CORRECT?
  - A. Fibrates monotherapy is effective for primary prevention
  - B. Fibrates monotherapy is ineffective for secondary prevention.
  - C. In patients on niacin, adding a fibrate reduce mortality further.
  - D. Niacin monotherapy is effective for secondary prevention.
  - E. In patients treated with a statin, adding a fibrate reduces mortality further.

- 7. In mixed dyslipidaemia, the primary goal of lipid therapy is to reduce LDL-C to target with X. What is X?**
- Combination of niacin and omega-3 fatty acid.
  - Fibrate.
  - Statin.
  - Niacin.
  - Omega-3 fatty acid.
- 8. About a defined target for treatment of mixed dyslipidaemia, which of the following is the target to be achieved for the very high risk patient?**
- LDL-cholesterol to 100mg/dL.
  - LDL-cholesterol to less than 70mg/dL.
  - LDL-cholesterol to less than 80mg/dL.
  - HDL-cholesterol to 50mg/dL.
  - Triglycerides to less than 150mg/dL.
- 9. With regards to the use of Fibrates in treatment of dyslipidaemia:**
- In Helsinki Heart study, gemfibrozil had a 50% relative risk reduction in CAD.
  - In the FIELD study, fenofibrate reduced CVD risk by 27% in mixed dyslipidaemia.
  - Combination therapy gives fewer reports of skeletal muscle adverse events.
  - Fenofibrates plus statin reduce more CVD events than statins alone in ACCORD trial with diabetic patients.
  - All of the above are correct.
- 10. In mixed dyslipidemia, which of the following lipid profile is expected to be present?**
- High TG, High HDL-C, and small dense VLDL-C.
  - High TG, High HDL-C, and big dense VLDL-C.
  - Low TG, low HDL-C, and small dense LDL-C.
  - Low TG, low LDL-C, and big dense LDL-C.
  - High TG, low HDL-C, and small dense LDL-C.
- 11. With regards to coronary heart disease (CHD) events and LDL levels, most studies showed that X% of CHD occur in patients with “normal” or “near normal” LDL levels. What is X?**
- 40-50.
  - 50-60.
  - 60-70.
  - 70-80.
  - 80-90.
- 12. For the past few decades, in the pharmacological management of dyslipidemia, the reduction of X levels has been the main objective of lipid lowering therapy. What is X?**
- Non-high density lipoprotein cholesterol (non-HDL-cholesterol).
  - Very low density lipoprotein cholesterol (VLDL-cholesterol).
  - High density lipoprotein cholesterol (HDL-cholesterol).
  - Triglyceride.
  - Low density lipoprotein cholesterol. (LDL-Cholesterol)
- 13. In the patient whose triglycerides level remains high (more than 200 mg/dL), or HDL-cholesterol remains low (less than 40 mg/dL) even if he has achieved his LDL-cholesterol goals, what is the secondary target of therapy?**
- Non-HDL cholesterol level.
  - Triglycerides level.
  - LDL-cholesterol level.
  - Chylo-micron level.
  - VLDL cholesterol level.

**14. The treatment of choice for a patient with dyslipidemia and residual cardiac risk is X. What is X?**

- A. Combination of fibrate and niacin.
- B. Combination of statin and niacin.
- C. Combination of ACE-Inhibitor and calcium channel blocker.
- D. Combination of rostrivastatin and simvastatin.
- E. Combination of omega-3 fish oil and simvastatin.

**15. Which of the following is a common side effect of niacin?**

- A. Cough.
- B. Postural hypotension.
- C. Flushing.
- D. Constipation.
- E. Urticaria.

**16. About incretins, which of the following description is CORRECT?**

- A. Synthetic hormones manufactured to treat raised blood sugar.
- B. Yeast preparations that can lower blood sugar.
- C. Gut derived peptide hormones released from intestinal K and L cells.
- D. Specific receptors on alpha cells of the pancreas.
- E. Herbal preparations that can lower blood sugar.

**17. About the action of Glucagon-like peptide- I (GLP-I), which of the following action is CORRECT?**

- A. It can increase glucagon secretion.
- B. Support the synthesis of proinsulin to replenish insulin stores in alpha cells.
- C. It can raise glucagon concentrations.
- D. Can increase gastric emptying and induce beta cells to respond to inhibitory action of hyperglycaemia
- E. It can increase insulin secretion.

**18. About the currently available incretins, which of the following is CORRECT?**

- A. They have a very long half life of more than 24 hours
- B. They are used to treat type I diabetics.
- C. They cannot be broken down by proteolytic degradation.
- D. They naturally and do not need any modifications to change its function for clinical practice
- E. They can reduce HbA1C by about 0.7 to 1%.

**19. About Incretin-based therapy in people with diabetes:**

- A. GLP-1 can be potentiated by inhibiting the proteolytic degradation and inactivation through the action of DPP-4.
- B. Most DPP-4 inhibitors can lower HbA1C by more than 2%.
- C. Causes weight gain like in other oral hypoglycaemics.
- D. Pancreatitis is a very common side effect if such therapies.
- E. All of the above are correct.

**20. About Incretin based therapies, which of the following is CORRECT?**

- A. Is useful especially for post prandial treatment of hypoglycaemia.
- B. GLP-1 analogues have a neutral effect on weight.
- C. Is classified as Tier 1 for American Diabetic Association for treatment of Diabetes.
- D. The American Association of Clinical Endocrinologists has put incretin based therapy as first line therapeutic agent.
- E. ALL of the above are correct.

**21. Intensive lifestyle intervention and weight loss can result in X. What is X?**

- A. Improved thyroid function.
- B. Delay of development of Type I Diabetes.
- C. Improved glycaemic and lipid profile in people with diabetes.
- D. Increased cardiovascular risk in susceptible individuals.
- E. ALL of the above are correct.

**22. In the various types of Metabolic Bariatric Surgeries (MBS) available nowadays:**

- A. Restrictive type surgeries tend to be more complex and have more side effects.
- B. Bypass type procedures do not require long-term vitamin or nutrient supplementation.
- C. Laparoscopic adjustable gastric banding involves the resection of the greater curve of the stomach
- D. Bypass type operations nowadays commonly involve restrictive-malabsorptive procedures.
- E. Weight loss is greater with the restrictive procedure than the bypass procedure.

**23. Metabolic Bariatric Surgery (MBS) has several effects on diabetes mellitus. Which of the following is CORRECT?**

- A. MBS results in enhanced secretion of GLP-1 by 70%.
- B. Laparoscopic adjustable gastric banding (LAGB) has the lowest rate of remission of Type 2 diabetes of 20%.
- C. MBS results in remission of Type 2 diabetes mellitus.
- D. The efficacy of MBS on diabetes is less than 2 years.
- E. ALL of the above are correct.

**24. The cardiovascular and lipid effects of MBS are several. Which of the following is CORRECT?**

- A. MBS improves hypertension in more than 95% of patients.
- B. MBS results in attainment of blood pressure without need for medications in 66% of patients.
- C. MBS increases LDL and reduces HDL.
- D. MBS increases TG levels.
- E. None of the above is correct.

**25. About bariatric surgery, which of the following is CORRECT?**

- A. Is recommended as an aesthetic procedure.
- B. Have minimal risks and unknown complications.
- C. No restriction in eating is needed.
- D. Lifelong follow-up and monitoring for nutrient deficiency is needed.
- E. ALL of the above are correct.

**26. With regards to the etiology of hypertension, which of the following is CORRECT?**

- A. About 10% of the causes are idiopathic.
- B. The INTERSALT study confirmed a direct relationship between sodium and mean blood pressure.
- C. Aldosterone promotes hypertension by down regulation of angiotensin II receptor.
- D. Overactivity of the sympathetic system results in increased blood pressure by promoting volume expansion.
- E. ALL of the above are correct.

**27. With regards to the control of blood pressure, which of the following is CORRECT?**

- A. The usual aim is to bring the target BP to less than 130/80 mmHg for patients with or without risk factors or target organ damage.
- B. For patients with diabetes or chronic kidney disease the aim is for the blood pressure to be less than 120/70 mmHg.
- C. Poor health conditions leading to low blood pressure and an increase risk for death probably explain the J-curve.
- D. The findings of a meta-analysis of 7 randomised controlled trials suggest that the increased risk of events observed in patients with low blood pressure was related to anti-hypertensive treatment.
- E. ALL of the above are correct.

**28. With regards to the results of several currently concluded trials involving treatment of blood pressure, which of the following is CORRECT?**

- A. ONTARGET retrospective analysis revealed that in trial BP reduction and risk of AMI, heart failure and CV mortality are very closely related.
- B. Target BP levels recommended in current guidelines (<130/80 mmHg) are shown in trials to support prevention of macrovascular outcomes in patients with diabetes.
- C. The HYVET study showed that showed that for elderly patients, the reduction in BP from >160 mmHg to 143.5/75.4 mmHg with active treatment resulted in 39% reduction in risk of fatal stroke.
- D. INVEST study showed that tight control is better than usual control of BP in diabetic patients.
- E. ALL of the above are incorrect.

**29. With regards to treatment of hypertension and risk of diabetes, which of the following statement is CORRECT?**

- A. Anti hypertensives do not affect the risk of developing diabetes.
- B. Hypertensive patients who develop diabetes are at high cardiovascular risk.
- C. ACE inhibitors significantly reduce incidence of new onset diabetes very much more than ARB.
- D. Pre-treatment plasma glucose cannot be used to predict new onset diabetes.
- E. All of the above are correct.

**30. About the single pill combination therapy in treating hypertension, which of the following is CORRECT?**

- A. The single pill combination therapy is useful especially for those who require more than or equal 30/15 mmHg BP reduction.
- B. The single pill combination therapy usually has fewer side effects due to lower doses of component drugs.
- C. ACEI/HCTZ combination appears better than ACEI/CCB in ACCOMPLISH trial to reduce CV events and mortality.
- D. The single pill combination therapy has a draw back of greater postural hypotension.
- E. ALL of the above are correct.