ASSESSMENT OF 15 MCQS

FPSC NO : 86
MCQS ON CONTEMPORARY TYPE 2 DIABETES MANAGEMENT – WHAT'S NEW?
Submission DEADLINE: 24 November 2020, 12 NOON

INSTRUCTIONS
- **To submit answers to the following multiple choice questions, you are required to log on to the College Online Portal (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 Online Portal before the submission deadline stated above.**
- **There will be NO further extension of the submission deadline**

1. Heart failure in diabetic patients:

A. Presents as heart failure with reduced ejection fraction only
B. Is a result of atherosclerotic disease only
C. May be a result of cardiomyopathic process independent of atherosclerosis
D. Presents as heart failure with preserved ejection fraction only
E. Is associated with a similar risk of mortality compared to non-DM patients

2. Routine cardiac screening for asymptomatic diabetic patients involves:

A. Cardiovascular risk factor assessment
B. Exercise stress electrocardiogram
C. Myocardial perfusion scan
D. CT coronary angiogram
E. Invasive coronary angiography

3. Diabetic nephropathy:

A. Always presents with albuminuria preceding a reduction in glomerular filtration rate
B. Albuminuria is associated with an increase in adverse cardiovascular and renal outcomes
C. Albuminuria is not associated with adverse cardiovascular outcomes
D. Is associated with increase in renal outcomes but not cardiovascular outcomes
E. Occurs at least five years after the diagnosis of type 2 diabetes

4. Screening for cardiovascular and renal complications in DM patients

A. Is important to guide choice of glucose-lowering therapy
B. Does not alter choice of glucose-lowering therapy
C. Involves advanced cardiac testing e.g. exercise stress electrocardiogram
D. Should be performed for patients at least five years after the diagnosis of type 2 diabetes
E. Should include a 24-hour urine protein collection

5. Cardiovascular risk stratification in DM patients

A. Coronary artery calcium score should be routinely used
B. Coronary artery calcium score may be useful to risk stratify patients to guide therapy for asymptomatic DM patients
C. Coronary artery calcium score should be performed for DM patients with typical chest pain symptoms
D. Is only useful in DM patients with cardiac symptoms
E. Is not important in patients with Type 1 diabetes

6. Which of the following is true about the action of SGLT2 inhibitor?

A. Decrease hepatic glucose production
B. Glucose-dependent insulin secretion
C. Increase skeletal muscle glucose uptake
D. Increase urinary glucose excretion
E. Suppress appetite centrally

7. Mary's glycated haemoglobin (HbA1c) hovers around 7.2 percent for the past nine months while on metformin 500 mg thrice daily. She is not able to tolerate a higher dose of metformin. She has hypertension, well-controlled on losartan 100 mg daily, and dyslipidaemia on atorvastatin 40 mg nocte. She has mild retinopathy and microalbuminuria. Her estimated glomerular filtration rate was 46 ml/min. Which of the following is the most appropriate next management?

A. ACE inhibitor
B. Dipeptidyl-peptidase inhibitor
C. Fenofibrate
D. SGLT2 inhibitor
E. Sulphonylurea

8. Azman, a 55-year old male, has type 2 diabetes mellitus, on metformin 850 mg thrice daily, diamicron MR120 mg daily, and forxiga 10 mg daily. His most recent HbA1c was 7.2 percent. His body mass index is 30.5 kg/m^2. He is

planned for total knee replacement surgery the following week. Which of the following is the most appropriate management of his diabetes?

A. Add linagliptin 5 mg to reduce glycaemia level
B. Stop diamicron MR 2 to 3 days before surgery
C. Stop forxiga 2 to 3 days before surgery
D. Stop metformin 2 to 3 days before surgery
E. Very-low-calorie diet to lose five percent body weight

9. Ramasamy, a 55-year old male, has type 2 diabetes and recently admitted for unstable angina. He sees you today and his HbA1c is 9.8 percent while on metformin 850 mg thrice daily and diamicron MR 30 mg daily. His blood pressure is 120/80 mmHg, and his BMI is 30 kg/m^2. His other medications include aspirin 100 mg daily, Plavix 75 mg daily, atorvastatin 40 mg daily, bisoprolol 5 mg daily and enalapril 5 mg daily. Which of the following is the most appropriate management of his diabetes?

A. Add acarbose 50 mg twice daily
B. Add empagliflozin 25 mg daily
C. Add sitagliptin 100 mg daily
D. Add injection liraglutide 0.6 mg daily
E. Start basal-bolus insulin therapy

10. Which of the following situations could predispose euglycaemic ketoacidosis in a diabetic patient while on SGLT2 inhibitor?

A. Acute exacerbation of asthma
B. Elective cataract surgery
C. Oesophagogastroduodenoscopy
D. Fasting during Ramadan month
E. Post-op cardiac bypass surgery

11. You are reviewing a patient with diabetes in your practice. He is 65 years old and has been a diabetic (type 2 DM) for ten years. His HbA1c is 7.5 percent. He has been smoking the past 30 years. His BMI is 31.6. He has not had any clinically evident CV disease. His BP is 155/83mmHg in the clinic. His eGFR is 73ml/min/1.73m^2. UACR reading 250mg/g (28.2 mg/mmol). He is presently being treated with metformin 850mg BD, glipizide 7.5mg BD, simvastatin 10mg ON, nifedipine LA 30mg OM.

Which of the following is the best course of management option?

A. Replace metformin with a SGLT2-I
B. Increase glipizide to 10mg BD
C. Increase nifedipine LA to 30mg BD
D. Add SGLT2-I and start ARB
E. Increase simvastatin to 15mg ON

12. A 43 years old patient with type 2 DM for the past three years attended your clinic with minimal leg swelling. She was otherwise well. No recent illness and no new medications. On examination, she has mild bilateral pitting edema of her lower limbs. Her BP was 138/78mmHg. Her lungs were clear and jugular vein pressure (JVP) was not raised. Her usual medications were metformin 1000mg BD, gliclazide MR 60mg OM, enalapril 20mg BD, and atenolol 50mg OM. You asked for labs and she was seen the next day.

HbA1c 8.2 percent

Creatinine 125 umol/l (was 105 umol/l six months ago)

Potassium 5.0 mmol/l

Urine ACR 2300 mg/g (260mg/mmol)

What would you advise?

A. Replace Enalapril with Losartan 100mg OM
B. Replace Gliclazide MR with SGLT2-I
C. Add SGLT2-I
D. Add Valsartan 80mg OM
E. Send her for nephrology consult

13. A 34 years old bank executive came for health checks. Never been diagnosed with any medical conditions in the past and was not taking any long-term medications. He does not smoke. His BMI was 28.5 and his BP was 145/85mmHg (confirmed in subsequent visits). His fasting blood glucose was 9.5mmol/l and HbA1c was 8.1 percent. He is covered by the company's health benefits.

In addition to lifestyle changes:

A. You will start metformin, SU and ARB.
B. You will start metformin, DPP4-I and ARB.
C. You will start metformin and ARB.
D. You will start DPP4-I, SGLT2-I and ARB.
E. You will start metformin only.

14. A 55 years old patient with type 2 DM was evaluated in your clinic. Her BMI was 28.3 and her BP was 135/75mmHg in the clinic. Her HbA1c was 8.5 percent. Her serum creatinine was 98umol/l and her UACR was 125mg/g (14mg/mmol). She remembers having an episode of urinary tract infection when she was in her 20s. She is post-menopausal now with three children. Her husband passed away three years ago from cancer. Her current medications are tolbutamide 1g BD and nifetex (nifedipine SR + Atenolol) 20/50mg one-tab OM.

Which of the following is the best course of management option?

A. Replace tolbutamide with SGLT2-I and replace Nifetex with ACEI.
B. Add metformin and replace Nifetex with ACEI.
C. Add metformin and SGLT2-I
D. Add metformin and DPP4-I
E. Add metformin, SGLT2-I and replace Nifetex with ACEI.

15. A 60-year-old patient with many years of type 2 DM, hypertension, and dyslipidaemia came to consult you for a second opinion. He complained that he has difficulty maintaining his weight – having gained 5kg in one year. He does not smoke or drink alcohol. He is an account executive. His BMI is now 30.4. His HbA1c was 8.1 percent and his BP averaged about 140/80mmHg at home. He has a normal renal function.

His regular medications are metformin 250mg BD, glipizide 10mg BD, simvastatin 10mg ON and Lisinopril 10mg OM.

Which of the following is <u>NOT</u> recommended?

A. Increase dose of glipizide
B. Moderate intensity exercise for 150min/week
C. Increase dose of metformin
D. Adding SGLT2-I
E. Adding low dose aspirin