

ASSESSMENT OF 30 MCQs

FPSC NO : 20
SUBMISSION DEADLINE : 31 MARCH 2007

INSTRUCTIONS

- κ Attempt all the following multiple choice questions.
- κ There is only one correct option for each question.
- κ Shade your choice on the given answer sheet using a **2B pencil**.
- κ The answer sheet should be sent to the College of Family Physicians Singapore for marking before the submission deadline.

1. Which one of the following statements about diabetes control is CORRECT?
 - a. HbA1c of less than 5 is now universally accepted as the indicator of satisfactory glycaemic control.
 - b. HbA1c of more than 7% is accepted as an indicator of poor control.
 - c. The American Diabetes Association suggested that HbA1c of less than 7% as the target for satisfactory control of diabetes.
 - d. In the United Kingdom Prospective Diabetes Study (UKPDS) the mean HbA1c of the conventional treatment arm was 8.2%.
 - e. Patients with HbA1c exceeding 8% but are asymptomatic do not require active interventions.

2. Which one of the following is LEAST LIKELY to be an associated clinical feature of poorly controlled diabetes?
 - a. Acanthosis nigricans.
 - b. Recurrent urinary tract infection.
 - c. Gingivitis.
 - d. Tuberculosis.
 - e. Pityriasis rosea.

3. The assessment of a diabetic patient revealed the following information. Which one of the following is an indication of poor control?
 - a. Neovascularisation on fundoscopy.
 - b. Granuloma annulare.
 - c. Loss of pain sensation in both feet.
 - d. Random blood sugar of 17.3 mmol/L.
 - e. All of the above.

4. In the assessment of a patient with diabetes, which one of the following is LEAST likely to yield abnormal results?
 - a. Measurement of BMI.
 - b. Auscultation of the heart and lungs.
 - c. Measurement of blood pressure.
 - d. Inspection of the foot.
 - e. Testing for sensation of pain.

5. In the drug history of a patient with poorly controlled diabetes, which one of the following drugs is of the LEAST significance?
 - a. Hydrochlorthiazide.
 - b. Prednisolone.
 - c. Niacin.
 - d. Amprenavir.
 - e. Paracetamol.

6. Which one of the following conditions is it the least useful to screen routinely in a type 2 diabetic patient?
 - a. Osteoarthritis.
 - b. Microalbuminuria.
 - c. Peripheral neuropathy.
 - d. Ischaemic heart disease.
 - e. Retinopathy.

7. Which one of the following statements about eye assessment of diabetic patients is CORRECT?
 - a. Fundoscopy by a well trained doctor is as effective as retinal photography in screening for diabetic retinopathy.
 - b. Testing for visual acuity provides little information and need not be carried out routinely.
 - c. Direct ophthalmoscopy should be performed after instilling pilocarpine eye drops.
 - d. Specially designed ophthalmoscopes are available which enable examination of the fundus without pupil dilation.
 - e. Patients should be screened for retinopathy biennially.

8. The following statements about screening for diabetic nephropathy are correct EXCEPT:
 - a. Nephropathy screening should be started at the time of diagnosis.
 - b. Screening for microalbuminuria should be done annually.
 - c. For the albumin-to-creatinine ratio on a spot urine, a ratio of 10mg albumin per 1g creatinine is considered as elevated.
 - d. Patients with proteinuria on dipstick need not be screened for microalbuminuria.
 - e. Consider stopping metformin if serum creatinine exceeds the upper limits of the normal.

9. Mdm P, 69 years old, is known to have diabetes for the past 15 years. She has been non-compliant with the oral medication prescribed by her previous doctor. The last time she was on medication was a few months ago. She visits you for a minor illness and you manage to convince her to take better care of her diabetes. In your examination, you discovered the following:

Blood pressure 160/95mm Hg

Visual acuity 6/9 both eyes

Dry cracked skin on both heels

Loss of sensation to pain over both feet

Absent dorsalis pedis pulse both feet and tibialis posterior pulse on the left foot.

Which one of the following conclusions drawn is most APPROPRIATE?

- The dry cracked skin should be managed with emollients to prevent infection and ulcer formation.
- Retinopathy is unlikely to be present in this case.
- The blood pressure is acceptable for her age.
- The patient requires an urgent referral to a neurologist.
- The absence of pulses detected is common for normal person of her age.

10. Which one of the following statements about the nylon monofilament test is INCORRECT?

- Response delayed for more than 3 seconds is considered negative response.
- Negative response should be confirmed by making repetitive contacts on the same site.
- Apply sufficient force to cause the filament to buckle.
- The patient should not be able to see where the filament was applied.
- The monofilament should first be applied to the patient's inner wrist to allow the patient to appreciate what to expect during the test.

11. Which one of the following drugs is an insulin sensitiser?

- Glibenclamide.
- Arcabose.
- Rosiglitazone.
- Repaglinide.
- Dipeptidyl peptidase.

12. A 54-year-old-man is newly diagnosed diabetic. He is frequently thirsty and "passes much more urine than usual". His height is 1.74m and his weight is 81 kg. His weight was 86 kg 4 months ago. He has no ketones in the urine. You decided to initiate treatment. Which one of the following options is MOST APPROPRIATE?

- A 4-week trial of diet and exercise.
- Start metformin.
- Start glibenclamide.
- Start insulin injection.
- Start arcabose.

13. A 36-year-old man was diagnosed as diabetic after routine health screening. His height was 1.69m and his weight is 78kg. He was referred to a dietician and given exercise prescription. When reviewed at the 6th month, his HbA1c was 9.6%. Which one of the following treatment options is MOST APPROPRIATE?

- Continue with diet and exercise for a further 6-month period.
- Start metformin.
- Start glibenclamide.
- Start insulin.
- Start arcabose.

14. An 36-year-old obese patient was recently diagnosed to have diabetes mellitus. He was reluctant to start medication but agreed after persuasion. He was started on metformin 850mg bd 2 weeks ago. He does not like the medication saying it makes him vaguely uncomfortable. He also thinks that it is causing the diarrhea that he has been having on and off for the past 2 weeks. Which one of the following actions is MOST APPROPRIATE?

- Start a 1 week course of loperamide to be taken when necessary and review.
- Stop metformin and start insulin.
- Advise him to continue for another 2 weeks telling him that he will get use to the medication.
- Reduce the dose of metformin to 250mg tds for 2 weeks and review.
- Needs more convincing on why he needs the medication.

15. A patient who 1.70m tall and 89kg was on metformin 500 mg tds for the past 4 months. At review, he still has not reached glycaemic control targets. Which one of the following courses of action is MOST APPROPRIATE?

- Increase dose of metformin to 850mg tds.
- Add glipizide 5 mg om.
- Add repaglinide 0.5mg half hour before main meals.
- Add arcabose 50mg tds together with main meals.
- Add chorpropamide 250mg om.

16. Which one of the following statements about insulin therapy is INCORRECT?

- Insulin is indicated only if the patient with declining control is symptomatic.
- Insulin is absolutely essential for the treatment of Type 1 diabetes.
- Insulin is used in Type 2 diabetics during the peri-operative period.
- Recombinant human insulin is recommended for use in pregnant patients with diabetes.
- Up to 40% of Type 2 diabetics will require insulin augmentation for optimal control of diabetes.

- 17. Which one of the following combinations of insulin is APPROPRIATE?**
- Soluble insulin and lente insulin.
 - Soluble insulin and ultralente insulin.
 - Soluble insulin and insulin glargine.
 - Insulin lispro and lente insulin.
 - Soluble insulin and NPH insulin.
- 18. Which one of the following insulins has an action profile of onset of action within 15 minutes, peak activity at 2-4 hours and duration of 6-8 hours after subcutaneous injection?**
- Lente insulin.
 - NPH insulin.
 - Soluble insulin or Regular insulin.
 - Ultralente insulin.
 - Rapid acting insulin analogues.
- 19. Which one of the following statements about the pharmacology of insulin is INCORRECT?**
- Insulin action starts within 5 minutes of injection at the subcutaneous site.
 - Approximately 50% of insulin is removed in a single pass through the liver.
 - Insulin predominantly exists in hexameric form at the injection site.
 - A 5,000-10,000 fold dilution of soluble insulin hexamers in the subcutaneous tissues is necessary before it can diffuse across capillaries and into the circulation.
 - Insulin is available in 500 units per ml but is only used in patients with severe insulin resistance.
- 20. Which one of the following statements about human insulin analogues is INCORRECT?**
- Insulin lispro and insulin aspart obviate the need to wait 3-0-45 minutes after injection for meals as recommended with regular insulin use.
 - The rapid acting insulin analogues attain higher concentrations after subcutaneous injection compared to conventional human insulin and they reduce post prandial glucose to a greater extent.
 - The long acting insulin analogues have virtually no plasma peak and act for about 20-24 hours making them ideal as once daily administration for basal insulin requirement.
 - Insulin glargine and insulin detemir are ideal for use in pregnancy.
 - The shorter duration of action of the rapid acting insulin analogues lead to a lower incidence of hypoglycaemia.
- 21. Mr Tan, a diabetic on 2 oral hypoglycaemic agents at maximum dose and is compliant with diet has a HbA1c of 8%. Which one of the following statements is INAPPROPRIATE?**
- Add a third oral hypoglycaemic.
 - Check the fasting glucose level.
 - Keep the two oral agents at the same dose and add bedtime basal insulin if the fasting glucose level is high.
 - Lower fasting glucose towards normal which will lower postprandial glucose excursion and bring down HbA1c.
 - Start on insulin twice daily therapy.
- 22. Mr Tan's fasting glucose is mainly >8.9 mmol/L and agrees to initiate insulin therapy within a limited budget. Which one of the following statements is INCORRECT?**
- Start bedtime basal insulin at 0.1 U/kg.
 - Recommend glargine as the basal insulin.
 - Measure fasting glucose every 3 to 5 days and adjust dose of insulin.
 - If fasting glucose after 3 to 5 days is 7.8 mmol/L increase bedtime basal insulin by 4 units.
 - Check HbA1c in 6-8 weeks after initiating insulin therapy.
- 23. Mr Tan's fasting glucose settled to mainly <6.6 mmol but his HbA1c is still >7.0%. Which one of the following actions is INAPPROPRIATE?**
- Check 2-hour post prandial glucose with largest meal.
 - Initiate prandial insulin for that meal if post prandial glucose is >10mmol/L.
 - Actrapid insulin can be used as prandial insulin in this case.
 - Start prandial insulin 4-6 units and increase by 2 units every 3-5 days if target glucose level is not reached.
 - The post prandial glucose of all three main meals should be tackled simultaneously.
- 24. Which one of the following statements about maintaining insulin therapy in a patient is INCORRECT?**
- If a patient is on prandial insulin then stopping oral insulin secretagogues may be considered.
 - Patient on basal and prandial insulin should continue with oral insulin sensitizers as this usually helps to lower the effective dose of insulin required.
 - If both basal and prandial insulin are required it may be more convenient to prescribe premixed insulin.
 - Hypoglycemic episodes are acceptable in the course of aggressive management of glucose level using insulin.
 - Treatment regimens may need to be modified during intercurrent illness such as a urinary tract infection.
- 25. It is important for diabetic patients to achieve therapeutic goals as uncontrolled diabetes leads to complications. In this regard which one of the following statements is INCORRECT?**
- The long term complications of diabetes are the commonest causes of morbidity and mortality in such patients.
 - The long term complications are influenced by the degree and duration of hyperglycaemia.
 - With higher HbA1c levels there is increased risk of retinopathy, nephropathy and neuropathy.
 - Macrovascular disease is independent of HbA1c level.
 - The UKPDS and DCT provided the proof for the correlation between hyperglycaemia and risks of developing long term complications of diabetes.

- 26. In your communication with a patient with poor diabetes control, which one of the following approaches is INCORRECT?**
- Explain that if the diabetes remains poorly controlled, you will have to start him on insulin injections.
 - Explain that research have shown conclusively that poorly controlled diabetes can lead to complications such as loss of vision and kidney failure.
 - Explain that lifestyle factors such as exercise and diet are still very important even though they are already on medication.
 - Explain that a person with poorly controlled diabetes may not have any symptoms.
 - Explain that poorly controlled diabetes can sometimes develop sudden life-threatening complications.
- 27. When providing information to patients during the initial period after diagnosis, which one of the following messages is INCORRECT?**
- Early use of insulin, when required, can spare remaining beta cell function.
 - Insulin can be used to quickly control blood sugar levels even with patients who do not need insulin at the moment.
 - The majority of type 2 diabetics will not need insulin throughout their illness.
 - Insulin can be used either as a monotherapy or in combination with oral hypoglycaemics when lifestyle measures fail to achieve good control.
 - The objective of treatment is not just to lower blood sugar levels but to maintain it at near normal levels.
- 28. The barrier of delaying action by both physicians and patients can be avoided by adopting strategies. Which one of the following is INAPPROPRIATE?**
- Establish "actionable" HbA1c levels for every patient with diabetes.
 - Avoid annoying patients with repeated reminders of their target HbA1C levels.
 - Display progress towards achieving treatment goals by charting.
 - Choose quantifiable goals over general improvements.
 - Establish time frame for achieving HbA1c targets.
- 29. Which one of the following is the most APPROPRIATE mindset to adopt when we are trying to help patients accept insulin therapy?**
- Initiation of therapy is decided objectively by HbA1c levels.
 - Most patients will accept the idea of insulin therapy readily.
 - The decision to initiate insulin therapy ultimately belongs to the primary physician in charge.
 - Patients need to be provided with very specific information about insulin therapy to help them make the decision.
 - The emphasis should be on repeated explanations of the risk of delay.
- 30. After optimising medication and lifestyle factors, you decide that a patient requires insulin therapy. You bring up the subject and the patient flatly refuses saying that he is afraid of injections. Which one of the following is the most APPROPRIATE approach?**
- Refer him to a psychiatrist to help him overcome his phobia of injections.
 - Avoid statements such as "you have failed to control diabetes with tablets".
 - Minimise cost where possible.
 - Defer the discussion to the next consultation.
 - Show him the needles and explain that it is less painful than the blood tests that he experienced before.

**Distance Learning Module – FPSC No: 19
"Chronic Respiratory" MCQ's Answers**

Question No.	Answer	Question No.	Answer
1.	D	16.	B
2.	A	17.	B
3.	E	18.	E
4.	B	19.	B
5.	A	20.	C
6.	C	21.	E
7.	B	22.	B
8.	A	23.	E
9.	D	24.	E
10.	C	25.	A
11.	A	26.	D
12.	B	27.	C
13.	D	28.	D
14.	A	29.	C
15.	C	30.	A