GENESIS

(Post Graduation Medical Orientation Centre)

Foundation-1 Batch

Total Number- 60 | **Subject: Endocrinology-II** | **Time: 30 Min**

Pass Mark- 42 | Question 16-30 is based on Single answers | **Date: 11/02/20**

1. Regarding oxytocin
a) A hormone secreted by neuclei situated at spinal cord
b) Causes skeletal muscle contraction
c) Activity is enhanced by progesteron
d) Having no effect on non-pregnant uterus
e) Having no effect in male
TF (smooth) F (estrogen) FF (ejaculation) (Ref: Ganong-25th--313)

2. Regarding parathyroidectomy
a)↑ Serum Po4 concentration
b) Symptoms usually appears after few weeks
c) Symptoms usually appears after 2 or 3 days
d) CHVOSTEK sign positive
e) Plasma phosphate levels usually rise as the plsma Ca^{2+} level falls
T F T TT (Ganong-380)

3. What are the factors that causes INCREASE secretion of PTH?
a) ↑ Ca^{++} in circulation
b) ↑ 1,25- Dihydroxycholecalciferol
c) ↓ Phosphate in plasma
d) Impaired renal function
e) ↓ C-AMP
FFFTF (Ganong-25th-382)

4. What are the factors that decrease insulin secretion?
a) Glucose
b) K^+ depletion
c) Beta keto acid
d) Acetylecholine
e) Glucagon
FTFFF (Ref: Ganong-25th--439)

5. What are the factors that result in increase level of glucagon?
a) Glucose
b) Somatostatin
c) Secretin
d) Insulin
e) α-adrenergic stimulus
F FFFF (Ref: Ganong-25th--443)

6. Effects of insulin in various tissue
a) Increase cell growth
b) Decrease K^+ uptake in muscle
c) Increase glucose entry in muscle
d) Decrease ketogenesis in liver
e) Decrease ketone uptake in muscle
T F T T F (Ganong-25th-432)

7. Cushing syndrome may be caused by
a) Aderenocortical carcinoma
b) Pituitary ACTH producing adenoma
c) Pheochromocytoma
d) Prolonged use of ACTH
e) Neuroblastoma producing CRH
T T F T T

8. Permissive action of cortisol on
a) GH
b) Glucagon
c) Insulin
d) Calcitonin
e) Catecholamine
FTFFT

9. Phaeochromocytoma
a) Always arises from adrenal chromaffin cells
b) Produces catecholamine
c) 10% cases are associated with MEN type2
d) Fairly common cause of hypertension
e) Is diagnosed By 24 hour urinary VMA & metanephrine content
F T T F T

10. Causative Drugs of Gynaecomastia
a) Digoxin therapy
b) cimetidine
c) Exogenous androgen administration
d) 5 α reductase inhibitor therapy
e) Spironolactone
T T F F T

11. Adrenaline secretion from the adrenal glands increases the
a) Blood glucose level
b) Blood free fatty acid level
c) Blood flow to skeletal muscle
d) Blood flow to the splanchnic area
e) Release of renin in the kidneys
TTTFT

12. Excessive glucocorticoid production (Cushing's syndrome) causes an increase in
a) Skin thickness
b) Bone strength
c) Blood glucose
d) Arterial pressure
e) The rate of wound healing
FFTTF

13. In adrenal failure there is likely to be a fall in the
a) Extracellular fluid volume
b) Total red cell mass
c) The sodium:potassium ratio in plasma
d) Arterial blood pressure
e) Blood urea
TFTTF

14. A patient with severe diabetic ketoacidosis is likely to benefit from administration of
a) Intragastric fluids
b) Intravenous insulin
c) Isotonic glucose
d) Isotonic sodium chloride
e) Oxygen by breathing mask if hyperventilation is present
FTTTF

15. Parathormone secretion is usually increased
a) In patients with chronic renal failure
b) In people taking excessive amounts of vitamin D
c) In patients with anterior pituitary tumours secreting excessive amounts of its hormones
d) When blood phosphate levels fall
e) When plasma protein levels fall
TFFFF

Each question below contains five suggested answers- choose the <u>one best</u> response to each question (16-30)

16. Calcitonin decreases serum calcium level directly by
a) ↑ Bone formation
b) ↑ Urinary excretion of Ca^{++}
c) ↓ Bone resorption
d) ↓ Intestinal absorption of Ca^{++}
e) ↓ Formation of D3
C (Ganong-25th -383)

17. Glucagon is secreted by the ∝-cells of the pancreatic islets. Which of the following is most likely to induce glucagon secretion?
a) High serum concentration of glucose
b) Low serum concentration of amino acids
c) Low serum concentration of glucose
d) Secretion of somatostatin by the pancreatic 5-cells
e) Parasympathetic stimulation
C

18. A 26-year-old man has elevated parathyroid hormone levels secondary to a solitary parathyroid adenoma. Elevated parathyroid hormone levels lead to:
a) Decreased activity of osteoclasts
b) Decreased calcium absorption from the intestines
c) Decreased renal phosphate excretion
d) Increased formation of 1,25-dihydroxycholecalciferol
e) Increased renal excretion of calcium
D

19. A 56-year-oid woman on long-term steroid therapy was brought to the Accident and Emergency Department unconscious and hypotensive. On enquiry from the ambulance crew it was discovered that she had been unwell for last few days and had stopped taking her oral prednisolone. She most likely has:
a) Addisonian crisis
b) Diabetic ketoacidosis
c) Hypothyroidism
d) Primary hyperaldosteronism
e) Sheehan's syndrome
A

20. A 22-year-old male type I diabetic was received in the Accident and Emergency Department in ketoacidosis. What is the basic pathophysiology of diabetic ketoacidosis?
a) Action of glucagon
b) Decreased glycolysis
c) Decreased enzyme production by liver
d) Increased ketone bodies formation
e) Insulin deficiency
E

21. 21-Hydroxylase is an enzyme that is involved with the biosynthesis of the steroid hormones, aldosterone and cortisol. A 2-year-old baby girl with deficiency of 21-hydroxylase is most likely to have:
a) Congenital adrenal hyperplasia
b) Conn's syndrome
c) Cushing's syndrome
d) Klinefelter's syndrome
e) Turner's syndrome
A

22. A 36-year-old woman is diagnosed with a phaeochromocytoma. She is most likely to have increased serum levels of:
a) Aldosterone
b) Cortisol
c) Noradrenaline
d) Oxytocin
e) Vasopressin
C

23. A 26 yr-old female is investigated for menstrual disturbance. A diagnosis of PCOS is made. Which of the following finding is most cousistently seen in PCOS?
a) Obesity
b) Hirsutism
c) Ovarian cysts on USG
d) Raised LH: FSH ratio
e) Clitoromegaly
C

24. A 45-year-old woman is investigated for weight gain. She had had been unwell for around four months and described a combination of symptoms including depression, facial male-pattern hair growth and reduced libido. During the work-up she was found to be hypertensive with a blood pressure of 170/100 mmHg. Which one of the following tests is most likely to be diagnostic?
a) Renin:aldosterone levels
b) High-dose dexamethasone suppression test
c) Pelvic ultrasound
d) Overnight dexamethasone suppression test
e) 24 hr urinary free cortisol
D

25. Regarding pineal gland correct information is
a) Called 2nd eye
b) Large in old age
c) Inhibits gonadal function
d) Pineal tumors are associated with delayed sexual behaviors
e) Increase secretion during morning
C

26. Small amount of glucocorticoid must be present in several metabolic reactions except
a) Calorigenic action of glucagon
b) Lipolytic effect of epirephrine
c) Bronchodilation of catecolamines
d) Pressure response of the Glucagon
e) Calorigenic effect of the catecholamines
D (Ganong-25th -363)

27. A 52 year old man has a set of fasting blood as a part of a work up for hypertension. The fasting glucose comes back 6.5mmol/L. the test is repeated and Reported 6.7mmol/L. He says he feels constantly tired but denies any polyuria on polydypsia. How should these result be interpreted?
a) Impaired fasting glycaemia
b) Suggestive of DM but not diagnostic
c) Diabetis mellitus
d) Normal
e) Impaired glucose tolerance.
A

28. Which information is incorrect regarding testosterone hormone
a) ↑ Musculature by increasing protein synthesis
b) ↓ RBC count
c) ↑ Size of the kidney
d) Inhibits LH secretion
e) Increases the retention of Na^+
B

29. Which of the following is most likely to cause raised circulating serum calcium concentrations?
a) Chronic renal failure
b) Malabsorption
c) Rhabdomyolysis
d) Tertiary hyperparathyroidism
e) Tumour lysis syndrome
D

30. A 35-year-old woman with hypertension and hypokalaemia is suspected of having hyperaldosteronism. In addition to serum aldosterone measurement, initial evaluation of this patient should include measurement of which of the following?
a) Plasma adrenocorticotrophic hormone (ACTH)
b) Plasma cortisol
c) Plasma prolactin
d) Plasma renin
e) Urinary sodium
D