ENDOCRINE SYSTEM

1. A tumor that produces large amounts of catecholamines can be detected by examining the urine for*:*

a) K+
b) Uric acid
c) Choline
d) VMA
e) Calcium

2. The following hormone is secreted by the anterior pituitary gland:

a) Cortisol
b) TRH
c) CRH
d) Vasopressin
e) TSH

3. A ten year old boy has high levels of the growth hormone. He is likely to develop:

a) Acromegaly
b) Hyperglycemia
c) Mental retardation
d) Muscle atrophy
e) Hyperkalaemia

4. Stimuli for aldosterone regulation includes:

a) High sodium in the distal renal tubule
b) High serum potassium
c) Hypervolaemia
d) ACTH as a potent stimulator
e) Increased renal blood flow

5. Thyroid hormone actions include:

a) Augmentation of sympathetic effect on GI motility
b) Release of insulin
c) Lipogenesis
d) Increasing the numbers of Beta adrenergic receptors
e) Increasing diastolic arterial blood pressure

6. Release of oxytocin by the posterior pituitary gland is controlled by:

a) Oxytocin releasing hormone
b) Neural signals from hypothalamus
c) Neural signals from the thalamus
d) Changes in body temperature
e) Changes in arterial blood pressure

7. The following can be observed in a patient who has Grave's disease (hyperthyroidism):

a) Drop of the upper eyelid
b) High level of TSH
c) Intolerance to cold
d) High systolic blood pressure
e) Constipation

8. The thyrotropin releasing hormone, stimulates the secretion of:

a) Growth hormone
b) Prolactin
c) Adrenocorticotrophic hormone
d) Melanocyte stimulating hormone
e) Luteinizing hormone

9. The following is true about estrogen:

a) It is essential for development of female external genitalia
b) Is released only during the follicular phase of the ovarian cycle
c) Is released from granulosa cells
d) Its secretion is decreased by inhibin
e) Its receptors are located on cell membranes

10. The most sensitive regulatory mechanism of ADH secretion is dependent on*:*

a) The volume receptors
b) Renin-angiotensin system
c) Hypothalamic osmoreceptors
d) Renal glomerulotubular feedback
e) Renal principal cells

11. Clinical uses of Oxytocin include:

a) Stimulation of milk ejection in breastfeeding women
b) Stimulation of ejaculation in infertile men
c) Stimulation of uterine contraction in pregnant women
d) Induction of breast development in adolescent girls
e) Induction of vasoconstriction in hypotension

12. All the following is true about control of secretion if TSH *except*:

a) It is inhibited by T4
b) It is increased in cold weather
c) It is increased in Grave's disease
d) It is increased in TRH
e) Has no marked diurnal rhythm

13. The actions of ACTH include the following *except*:

a) Stimulation of melanocytes
b) Increased secretion of aldosterone
c) Induction of growth of the adrenal gland
d) Induction of secretion of adrenomedullins
e) Feedback inhibition of CRH

14. A most effective method of treating type I diabetes mellitus is:

a) The patient should not eat any carbohydrates
b) Exercise
c) Reduce weight
d) Drugs to stimulate the B cells of the pancreas
e) Daily injections of insulin

15. The following are actions of insulin, *except*:

a) Inhibition of protein degradation
b) Inhibition of gluconeogenesis
c) Inhibition of ketogenesis
d) Reduction of extracellular K^+
e) Increased renal tubular absorption of glucose

16. The following factors have a direct marked effect on the adrenal cortex to stimulate the secretion of aldosterone *except*:

a) Angiotensin III
b) Angiotensin II
c) Hyperkalemia
d) Hypernatremia
e) High levels of ACTH

17. A major regulator of bone growth is:

a) Parathyroid hormone
b) Calcitonin
c) Growth hormone
d) Prolactin
e) Active vitamin D

18. If a patient dies of hypercalcemia, the most likely cause would be:

a) Excessive bleeding due to failure of clotting
b) Paralysis of skeletal muscles due to failure of interaction between actin and myosin
c) Uncontrolled contraction of skeletal muscles due to hyperexcitability of nerves and muscles
d) Failure of the SA node to generate impulses
e) Hypo-osmolality

19. Primary hyperaldosteronism leads to:

a) Moderate hyperglycemia
b) Sodium natriuresis
c) Oedema
d) Alkalosis
e) Increased rennin secretion

20. Which of the following is a manifestation of Addison's disease:

a) Hypopigmentation
b) Good appetite
c) Hypoglycemia
d) Obesity
e) Hypertension

21. Excess cortisol in Cushing's syndrome is associated with:

a) Hypotension
b) Protein depletion
c) Hypoglycemia
d) Dry thick skin
e) Increased body hair

22. Insulin secretion is inhibited by:

a) Alpha adrenergic receptor stimulation
b) Vagal stimulation
c) Amino acids
d) GIP
e) Gastrin

23. Calcitonin:

a) Increases serum calcium by stimulation of osteoclasts
b) Prevents postprandial hypercalcemia
c) Is important in long-term regulation of serum ionized calcium
d) Is stimulated by a hypothalamic releasing hormone
e) Is released during stress

24. Hypomagnesemia is a recognized cause of:

a) Diabetes mellitus
b) Diabetes insipidus
c) Hypervitaminosis D
d) Tetany
e) Hypothyroidism

25. A ten year old boy has high levels of growth hormone. He is likely to develop:

a) Acromegaly
b) Hyperglycemia
c) Mental retardation
d) Muscle atrophy
e) Hyperkalemia

26. Products of the anterior pituitary gland include:

a) Melatonin
b) Acetylcholine
c) Beta endorphin
d) Inhibin
e) Somatomedins

27. Secretion of gonadotropins is ordinarily inhibited by which of the following

a) Estradiol
b) Testosterone
c) Calcium
d) Oxytocin
e) A or B

28. Testosterone action on target cells below the neck leads to increases un which of the following?

a) Spermatogenesis
b) Prostate size
c) Penile size
d) None of the above
e) A, B and C are correct

29. In humans, each of the following facilitates ovulation *except*:

a) Pulsatile secretion of gonadotropin-releasing hormone
b) Positive feedback effect of estradiol on LH secretion
c) Negative feedback effect of estradiol on LH secretion
d) Action of FSH on granulose cells
e) Secretion of LH in a surge pattern

30. Ionized calcium:

a) Forms 60% of total blood calcium
b) Cannot be filtered by the kidneys
c) Low levels stimulate calcitonin secretion
d) Levels in blood are increased by increase in H^+ concentration
e) Concentration inside the cell is the same as the interstitial fluid

31. Insulin can be described as:

a) Gluconeogenic
b) Ketogenic
c) Protein anabolic
d) Diuretic
e) Vasoconstrictive

32. The main effect of somatostatin secreted by the D cells of the islets of Langerhans appears to be:

a) Inhibition of the secretion of growth hormone
b) Stimulation of glucagon secretion
c) Inhibition of gastric acid secretion
d) Inhibition of insulin secretion
e) Relaxation of the sphincter of Oddi

33. Factors that act on the cells of the adrenal gland to cause secretion of aldosterone include:

a) Renin
b) Angiotensinogen
c) Angiotensin I
d) Atrial natriuretic peptide (ANP)
e) Potassium ions

34. The following effects can be caused by cortisol *except*:

a) Excessive loss of K+ in urine
b) Hypertension
c) Hyperglycemia
d) Increased production of CRH by the hypothalamus in cases of Cushing's syndrome
e) Immunosuppression

35. T3 is different from T4 in that:

a) It binds to receptors located on cell membranes
b) Its concentration increases in starvation
c) Its volume of distribution is high
d) It increases the efficiency of energy utilization
e) Most of it in plasma is bound to TBG

36. Known effects of ACTH include all of the following *except*:

a) Increased secretion of adrenal androgens
b) Increased secretion of aldosterone transiently
c) Increased pigmentation of body tissues
d) Stimulation of growth of zona reticularis of the adrenal cortex
e) Direct stimulation of surfactant secretion

37. Prolactin secretion:

a) Has diurnal rhythm
b) Can be inhibited by L-dopa
c) Is inhibited by chlorpromazine
d) Is stimulated by bromocriptine
e) Is continuously stimulated by prolactin releasing hormone

Answers

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