

CHAPTER V
ENDOCRINOLOGY

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ENDOCRINE GLANDS

(Endo = within; __crine = secreting; endocrine = secreting into the blood) Hormones = secretion of endocrine glands

NAME OF ENDOCRINE GLAND	NAME OF SECRETED HORMONES	MAIN FUNCTION
Anterior Pituitary (Adenohypophysis) (adj: adenohypophyseal) Adenohypophysial	<ol style="list-style-type: none"> 1. Adrenocorticotrophic H. (ACTH) 2. Follicle Stimulating H. (FSH) 3. Lutinizing Hormone (LH) (Gonadotropin) 4. Somatotropin or Growth Hormone (G.H.) 5. Thyrotropin; Thyroid Stimulating Hormone (TSH) 6. Prolactin (PRL) 	<ul style="list-style-type: none"> ❖ Stimulates adrenal cortex secretions especially cortisol ❖ Stimulates ovaries and testis (Gonads); Oogenesis + Spermatogenesis ❖ Stimulates testosterone secretion (men) and estrogen secretion (women) ❖ Stimulates growth of tissues and bone ❖ Stimulates thyroid gland growth and secretions ❖ Stimulates milk production
Posterior Pituitary (Neurohypophysis)	<ol style="list-style-type: none"> 1. Vasopressin (ADH) 2. Oxytocin 	<ul style="list-style-type: none"> ❖ Increases water reabsorption by kidney tubules ❖ Stimulates uterine contraction during labor
Ovaries (adj: ovarian)	<ol style="list-style-type: none"> 1. Estrogen (estradiol) 2. Progesterone 	<ul style="list-style-type: none"> ❖ Develops and maintains female sexual characteristics ❖ Prepares the uterus for the reception of a fertilized ovum + sustains pregnancy
Testes (adj: testicular)	Androgen (Testosterone) (adj: androgenic)	Promotes growth and maintenance of male sexual characteristics
Thyroid gland	<ol style="list-style-type: none"> 1. Tetraiodothyronine (thyroxine)(T₄) Triiodothyronine (T₃) 2. Calcitonin 	<ul style="list-style-type: none"> ❖ Increase metabolism in body cells <p>Lowers blood calcium</p>

NAME OF ENDOCRINE GLAND	NAME OF SECRETED HORMONES	MAIN FUNCTION
Parathyroid glands	Parathyroid hormone (Parathormone)	Increases blood calcium
Adrenal Cortex	1. Cortisol (Glucocorticoid) 2. Aldosterone (Mineralocorticoid) 3. Sex hormones (androgen, estrogen, progestins)	❖ Affects body metabolism ❖ Increases reabsorption of sodium ❖ Maintain secondary sex characteristics
Adrenal Medulla	1. Epinephrine (adrenalin) 2. Norepinephrine (noradrenaline)	❖ Sympathomimetic ❖ Sympathomimetic
Pancreas	1. Insulin (Beta cells) 2. Glucagon (alpha cells)	❖ Decreases blood sugar ❖ Increases blood sugar

OTHER HORMONES

HORMONE	PRODUCED BY	FUNCTION
Cholecystokinin	Small Intestine	Contracts Gall Bladder
Erythropoietin (Hematopoietin; Hemopoietin) (adj: hematopoietic) (adj: hemopoietic)	Kidney	Stimulates erythrocytes production
Gastrin	Pyloric Antrum	Stimulates secretion of gastric acid
Human chorionic gonadotrophin	Placenta	Sustains pregnancy
Melatonin	Pineal Gland	Regulation of sleep, mood, puberty and ovarian cycle
Prostaglandins (PG)	Body cells	Contract uterus Lower blood pressure Clump platelets Lower acid secretion in the stomach
Secretin	Mucosa of duodenum and upper jejunum	Stimulates secretion of pancreatic enzymes
Thymosin	Thymus gland	Affects Immune response

PREFIXES

PREFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
A__	not	gonad	ovary/testis	Agonad (adj: agonadal)	An individual without the gonads
A__	Not	Dipsia	Thirst	Adipsia	Absence of thirst
Anti__	against	diuresis	increase excretion of urine	Antidiuresis	Suppression of urinary excretion
Anti__	against	diuretic	increasing secretion of urine	Antidiuretic	An agent that suppresses urine formation
Anti__	against	thyroid	thyroid gland	Antithyroid	Counteracting the action of the thyroid gland
D__	Twice	Saccharo__	Sugar	Disaccharide	A sugar that yields two monosaccharides
Endo__	Within	__crine	Secretion	Endocrine (Endosecretory)	Secreting internally into the blood vessels
E__	good/ normal	thyroid	thyroid gland secretion	Euthyroid	Normal thyroid function
E__	outside	ophthalmometry	measurement of eyeball	Exophthalmometry	Measurement of the extent of protrusion of the eyeball in exophthalmos
Ezo__	Outward	__crine	Secretion	Exocrine	Secreting outwardly via a duct
Hyper__	more than normal, excessive	secretion	the product of a gland	Hypersecretion	Excessive secretion
Hyper__	Excessive	natrium	sodium	Hypernatremia	Excess of sodium in the blood
Hyper__	excessive	nitrogen	a gas	Hypernitremia	Excessive nitrogen in the blood
Hyper__	Excessive	kali	potassium	Hyperkalemia	Abnormal high concentration of potassium in the blood
Hyper__	excessive	calx	lime (Ca)	Hypercalcemia (Hypercalcinemia)	Excess of calcium in the blood
Hyper__	excess	glycemia	glucose in the blood	Hyperglycemia (Adj: hyperglycemic)	Abnormally increased glucose level in the blood
Hy__	below normal, deficient	secretion	the product of a gland	Hyposecretion	Diminished secretion
Hy__	deficient	natrium	sodium	Hyponatremia	Deficiency of sodium in the blood
Hy__	below normal	natrium	sodium	Hyponatruia	Abnormally low level of sodium in the urine

PREFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
Hypo__	deficient	kali	potassium	Hypokalemia (Hypokaliemia) (Hypopotassemia)	Abnormally low concentration of potassium in the blood
Hypo__	deficient	calx	lime (ca)	Hypocalciuria	Abnormally diminished amount of calcium in the urine
Hypo__	deficient	glycemia	glucose in the blood	Hypoglycemia	Abnormally decreased glucose level in the blood
Inter__	between	stices	parts	Interstitial	Between parts
Mono__	One or single	Saccharo__	Sugar	Monosaccharide	A simple sugar
Para__	beside, near	thyroid	thyroid gland	Parathyroid	Situated beside the thyroid gland
Poly__	many	dipsia	thirst	Polydipsia	Excessive intake of fluid Excessive thirst persisting for long periods of time.
Supra__	above	renal	kidney	Suprarenal	Adrenal gland
Tri__	Three	Glyceride	Fats	Triglyceride	A compound consisting of three molecules of fatty acid

SUFFIXES

SUFFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
__ar	Pertaining to	Nodule (nodulus)	A small knot	Adj: Nodular (Nodulated)	Marked with nodules (n: nodulation)
__ectomy	Removal of	hypophysis	Pituitary	Hypophysectomy	Surgical removal of the pituitary gland
__itis	Inflammation of	hypophysis (adj: hypophyseal; hypophysial)	Pituitary gland	Hypophysitis	Inflammation of the pituitary gland
__itis	Inflammation of	adrenal	Suprarenal gland	Adrenalitis	Inflammation of the adrenal gland
__pathy	disease	Endocrino__	Denoting endocrine gland	Endocrinopathy (endocrinosis)	Any disease due to disorder of endocrine system
__pathy	disease	Neuro__	Denoting relationship to nerve	Neuropathy	Functional disturbance or pathological change in the peripheral nervous system
__pathy	disease	Nephro__	Kidney	Nephropathy (Nephrosis)	Disease of the kidney
__sis	Process, State	Acido__	Acid	Acidosis (adj: acidotic)	Accumulation of acid and hydrogen ions in the body
__sis	Process, State	Alkalo__	Alakaline	Alkalosis (adj: alkalotic)	Accumulation of base and decrease of hydrogen ions in the body
__trophin (__trophin)	Showing affinity for	Gonado__	Denoting gonads	Gonadotropin (adj: Gonadotropic) Gonadotrophin (Gonadotrophic)	Hormone that stimulates the gonads
Give other examples e.g. oophorectomy; ovariectomy; orchiectomy; orchidectomy; thyroidectomy					
Give other examples e.g. oophoritis; ovaritis; orchitis; thyroiditis					
Give other examples e.g. thyrotrophic; adrenocorticotrophic; gonadotrophic					

COMBINING FORMS

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Adeno__	gland	hypophysis	pituitary gland	Adenohypophysis	Anterior lobe of pituitary gland
Gluko__	Glucose	__lysis	breakdown	Glucolysis (Glycolysis)	Breakdown of glucose
Gluko__	Glucose	__penia	deficiency	Glucopenia (Glycopenia)	Deficiency of sugar in the tissues
Gluko__ Glycos/o	Glucose	__genesis	Formation	Glucogenesis (adj: glucogenic)	Formation of glucose by glycogenolysis
Gluko__	Glucose	Neogenesis	New formation	Gluconeogenesis (glyconeogenesis) (adj: gluconeogenetic)	Formation of glucose from amino acids, lactate, glycerol
Glucos/o Glycos/o	Glucose	__uria	urine	Glucosuria (Glycosuria)	Presence of glucose in urine
Glyco__	Glycogen (adj: glycogenic)	__genesis	formation	Glycogenesis	Formation of glycogen
Glycogen/o	Glycogen (adj: glycogenic)	__lysis	Breakdown	Glycogenolysis (glycolysis)	Breakdown of glycogen to glucose
Homeo__	Same	__stasis	control	Homeostasis	Consistency of the internal environment
Keto__	ketone bodies	acidosis	accumulation of acids and H ⁺	Ketoacidosis	Acidosis because of accumulation of ketone bodies
Keto__	Ketone bodies	__osis	Disease process	Ketosis	Abnormal elevation of the concentration of ketone bodies in the body tissues and fluids
Ketono__	ketone bodies	__emia	blood	Ketonemia	Excess of ketone bodies in the blood
Ketono__	ketone bodies	__uria	urine	Ketonuria Ketosuria	Ketone bodies in the urine
Myxo__	mucus	edema	Swelling	Myxedema (adj: myxedematous)	Dry, waxy swelling of the skin associated with Hypothyroidism in adults
Neuro__	nerve	hypophysis	pituitary gland	Neurohypophysis	Posterior lobe of pituitary gland
Osteo__	bone	porosis	cavity formation	Osteoporosis Osteopenia	Reduction in the amount of bone mass
Thyro__	thyroid	toxico	poisonous	Thyrotoxicosis	Hyperthyroidism

SUFFIXES

SUFFIX	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
__enia	Blood	Insulino__	Insuline	Insulinemia	The presence of insulin in the blood
__enia	Blood	Acetono__	Acetone bodies	Acetonemia (Ketonemia)	Excess of Acetone bodies in the blood
__enia	Blood	Glycero__	Glycerides	Glyceridemia	Presence of glycerides, usually triglycerides in the blood
__enia	Blood	Albumino__	Albumin	Albuminemia	The presence of albumin in the blood plasma or serum
__genesis	Formation	Insulino__	Insuline	Insulinogenesis	The formation and release of insulin by the pancreas
__itis	Inflammation of	Pancreato__	Pancreas	Pancreatitis	Inflammation of the pancreas
__uria	Constituent of urine	Acetono__	Acetone bodies	Acetonuria (Ketonuria)	Excess of acetone bodies in the urine
__uria	Constituent of urine	Albumino__	Albumin	Albuminuria	Presence of albumin in the urine

ACRYNOMS & ABBREVIATION

17-OH:	17 hydrocorticosteroids
ACTH:	Adenocorticotropic Hormone (Adenocorticotropin)
ADH:	Antidiuretic Hormone (Vasopressin)
BMR:	Basal Metabolic Rate
Ca:	Calcium
CT:	Computed Tomography
DI:	Diabetes Insipidus
DM:	Diabetes Mellitus
FBG:	Fasting Blood Glucose
FBS:	Fasting Blood Sugar
FSH:	Follicle Stimulating Hormone
GH:	Growth Hormone
GTT:	Glucose Tolerance Test
ICSH:	Interstitial Cell Stimulating Hormone (LH)
IDDM:	Insulin Dependent Diabetes Mellitus; Type 1 Diabetes
IGF:	Insulin-like growth Factor (Somatomedin) Stimulates cellular growth and replication
K:	Potassium
LH:	Luteinizing Hormone
MSH:	Melanocyte Stimulating Hormone
Na:	Sodium
NIDDM:	Non-insulin Dependent Diabetes mellitus; Type 2 Diabetes
PRL:	Prolactin
PTH:	Parathormone
RIA:	Radioimmunoassay: Ability of antibodies to bind specifically to radioactively labeled hormone molecules
SIADH:	Syndrome of Inappropriate Antidiuretic Hormone (Excessive secretion of ADH)
T ₃ :	Triiodothyronine
T ₄ :	Tetraiodothyronine
TFT:	Thyroid Function Test
TSH:	Thyroid Stimulating Hormone (Thyrotropin)

PREFIXES

(With words ending in -ism: a state or condition, particularly a disease state; a process)

PREFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
Hyper__	excess	Cortisolism	state of cortisol	hypercortisolism	Abnormal increased secretion of cortisol
Hyper__	increased	Androgenism	Disease state of androgen secretion	hyperandrogenism	State caused by increased secretion of androgens
Hyper__	increased	adrenalism (dysadrenalism, suprarenalism)	disorder of adrenal function	hyperadrenalism (hyperadrenocorticism) (hypercorticalism) (hypercorticism)	Abnormally increased secretion of adrenocortical hormones
Hyper__	Excess	Lipidemia Lipemia Lipoidemia	Lipids in the blood	Hyperlipidemia Hyperlipemia Hyperlipoidemia	Excess of lipids in the blood
Hyper__	Excess	Glyceridemia	Glycerides in the blood	Hyperglyceridemia	Excess of glycerides in the blood
Hyper__	Excess	Cholesterolemia Cholesteremia	Cholesterol in the blood	Hypercholesterolemia Hypercholestermia (adj: Hypercholesterolemic)	Excess of cholesterol in the blood
Hypo__	decreased	gonadism	disease state of the gonads	hypogonadism (gonadal insufficiency)	Abnormally decreased gonadal function
Hypo__	deficient	insulinism	state of insulin	hypoinsulinism	Deficient secretion of insulin by the pancreas
Hypo__	diminished	pituitarism	disease state of the pituitary gland	hypopituitarism	Diminution or cessation of the function of the adenohypophysis
Hypo__	deficient	thyroidism	disease state of the thyroid gland	hypothyroidism (thyroid insufficiency)	deficiency of thyroid activity
Hypo__	diminished	androgenism	disease state of androgen secretion	hypoandrogenism	State caused by deficiency of androgens
Hypo__	diminished	Aderenalism	Disorder of adrenal function	Hypoadrenalism	Abnormally decreased secretion of adrenal hormones
Pan__	all	Hypopituitarism	diminution or cessation of adenohypophysis function	panhypopituitarism	Diminution or cessation of all the functions of the adenohypophysis
Trans__	Across; through	Sphenoidal	Pertaining to the sphenoid bone	Trans-sphenoidal	Performed through the sphenoid bone

VOCABULARY

Achondroplasia: (Achondroplastic dwarf)	A dwarf with large head, saddle nose, short extremities and usually lordosis
Acromegalogigantism:	Gigantism and acromegaly due to hypersecretion of growth hormone beginning before puberty and continuing into maturity
Acromegaly:	Disease due to excess growth hormone after puberty
Addison's Disease:	Hypofunctioning of adrenal cortex (adrenocortical insufficiency)
Adrenal virilism:	Condition due to inappropriate adrenal cortical androgen production noticeable in a girl or woman
Catecholamines:	A group of biogenic amines having a sympathomimetic action
Cretinism:	Condition due to congenital severe hypothyroidism (Dwarfism + Mental Retardation)
Cushing's Syndrome:	Condition caused by excess of cortisol from adrenal cortex (Hyperadrenocorticism)
D. Insipidus:	Due to insufficient secretion of ADH (Insipidus = tasteless)
Diabetes Mellitus: (DM)	Caused by insufficient insulin secretion or insulin-resistant tissue (Mellitus = sweet or sugar)
Dwarf:	A person who is unusually short
Endogenous: (Endogenic; endogenetic)	Developing or originating within the organism or arising from causes within the organism [opp: exogenous]
Feminine:	Having qualities normally associated with females
Feminity:	Possession of normal female qualities by a girl or woman
Feminization: (verb: feminize)	The induction or development of female secondary sex characters in the male (Feminism)
Gangrene: (Gangrenosis) (adj: gangrenous)	Death of tissue due to loss of vascular supply and followed by bacterial invasion and putrefaction

Gestational DM:	DM with onset or first recognition during pregnancy
Giantism: (Gigantism)	Excessive tallness due to oversecretion of growth hormone before puberty
Glycogen:	A polysaccharide produced by and stored in the liver
Goiter: Goitre	Enlargement of the thyroid gland (Thyromegaly)
Hirsute:	Shaggy; having abundant or excessive hair
Hirsutism: (Hirsuties)	Abnormal hairiness, especially an adult male pattern of hair distribution in women
Ketone bodies:	Products of carbohydrates and fatty acids metabolism: Excessive production leads to secretion in urine
Natriuresis:	Excretion of sodium in the urine
Natriuretic:	Promoting natriuresis, i.e. excretion of Na in the urine
Osteitis fibrosis cystica:	Bone decalcified and cystic, prone to fractures secondary to hyperparathyroidism
Pheochromocytoma:	Benign tumor of adrenal medulla (medullary chromaffinoma or paraganglioma)
Pituitary dwarfism: (Hypophysial dwarfism)	Dwarf with hypophysial infantilism
Pituitary Myxedema:	Severe hypothyroidism due to TSH deficiency
Precocious:	Developed earlier than as usual at a given age.
Precocity:	Unusually early development of mental or physical traits
Sexual Precocity:	Precocious puberty
Tetany:	Constant muscle contraction due to decrease in concentration of extracellular ionized calcium as in hypoparathyroidism, or vitamin D deficiency
Thyroid function tests:	Measure of levels of T_4 , T_3 and TSH in the blood
Type 2 DM:	Non-insulin dependent (NIDDM)

Type I DM:	Insulin Dependent (IDDM)
Uremia: (Azotemia; Nitremia)	Excess in the blood of urea, creatinine and other nitrogenous products of protein and aminoacid metabolism
Virilism:	Masculinity; Masculinization; Verb: masculinize + hirsutism (development of male character in a female)

ASSIGNMENT # 5

Creatinemia	Pitting Edema	Endocrinologist
Hypertension	Polyuria	Retinopathy
Hypernitremia	Atherosclerotic	Polydipsia
Fasting Blood Sugar	Nephropathy	Peripheral pulses
Weight loss	Glucosuria	Renal Function Tests
Atherosclerosis	Diabetes Mellitus	Ketonuria

Use the above terms to fill in the blanks in the passage below.

A 65 years old man was referred to the _____ because he complained of _____, _____ and _____. General physical examination revealed weak _____ and slight _____. of his legs. The arteries in the limbs felt thickened and _____. Ophthalmoscopic examination also revealed that the patient had _____. Blood and urine tests were ordered. The _____ was 180 mgs per 100 mls. The urine analysis showed that the patient had _____. He was an obvious case of _____. The blood for _____ revealed _____ and _____. His _____ and _____ explained why he also had _____. The patient was admitted for further follow-up and treatment.

ASSIGNMENT # 6

Adrenocorticotrophin	Addison's disease	Hypotension
Aldosterone	Reabsorption of Sodium	Endogenous
Hypophysitis	Weight Loss	Adrenal Cortex
Adenohypophysis	Hyponatremia	Anorexia
Mineralocorticoid	Hyponaturia	Hypoadrenocorticism

Use the above terms to fill in the blanks in the passage below:

A young man was admitted to the medical ward with _____, _____ and _____. Blood and urine investigations revealed that he had _____ and _____. Hormonal assay revealed a low level of _____. This hormone is a _____ which is secreted by the _____, and is responsible for increasing _____. The patient was diagnosed as a case of _____. Whether this is due to an _____ cause producing _____ or to _____ involving the _____ and resulting in diminished secretion of _____, is yet to be found.

DICTATION II

Thyroid Disease

Enlargement of the thyroid gland is known as **goiter**. **Endemic** goiter is a result of deficiency of iodine in the diet.

In **nodular** or **adenomatous** goiter **hyperplasia** of the thyroid **parenchyma** (**glandular** cells) occurs, resulting in **nodules** and **adenomas**.

In **hyperthyroidism**, also known as **thyrotoxicosis**, **excessive thyroid hormone** is produced. The **metabolic** rate in cells is increased leading to **thyrotoxic symptoms**. The term **thyroid storm** is used to indicate the abrupt onset of hyperthyroidism. **Exophthalmos** occurs as a result of swelling of tissues behind the eyeball. The cause of Grave's disease is thought to be an immunological disorder. Treatment may include thyroidectomy, management with **antithyroid** drugs that reduce the amount of secreted thyroid hormone, or **administration** of **radioactive** iodine, which destroys the **overactive glandular** tissue.

Hypothyroidism can be produced as a result of thyroidectomy, endemic goiter, or destruction of the gland by **irradiation**. The patient complains of **fatigue**, **muscular** and **mental sluggishness** and **constipation**.

Advanced hypothyroidism in adults is known as **Myxedema**. **Atrophy** of the thyroid gland occurs, and practically no hormone is produced. The skin becomes dry and **edematous** because of the collection of **mucus-like** (myx/o means mucus) material under the skin. Many patients develop **atherosclerosis** because lack of thyroid hormone increases the quantity of blood lipids. Recovery may be complete if thyroid hormone is given soon after **symptoms** develop.

Extreme hypothyroidism in **infancy** and **childhood** produces **cretinism**. This causes lack of normal **physical** and **mental** growth. The **cretin** has the appearance of an **obese**, short and **stocky** child. **Administration** of thyroid hormone can cure some of the **hypothyroid** effects.

QUIZ # 21

I. Write one synonym for each of the following:

1. Anterior Pituitary: _____
2. Growth Hormone: _____
3. Antidiuretic Hormone: _____
4. Thyroxine: _____
5. Androgen: _____
6. Cortisol: _____
7. Adrenalin: _____
8. Hypopotassemia: _____
9. Hypercarbia: _____
10. Nodular: _____
11. Hyperthyroidism: _____

II. Write the adjective for each of the following terms:

12. Myxedema: _____
13. Gonad: _____
14. Neurohypophysis: _____
15. Erythropoietin: _____
16. Diuresis: _____
17. Ketoacidosis: _____

III. Produce the opposite term for each of the following:

- 18. Glucolysis: _____
- 19. Diuresis: _____
- 20. Hyposecretion: _____
- 21. Gonad: _____

IV. Write the medical term for each of the following meanings:

- 22. The hormone that stimulates uterine contractions during labor: _____
- 23. The hormone that stimulates milk production: _____
- 24. The hormone that develops and maintains female sexual characteristics: _____
- 25. The hormone that lowers blood calcium: _____
- 26. The hormone that increases blood sugar: _____
- 27. Deficiency of sugar in the tissues: _____
- 28. Reduction in the amount of bone mass: _____
- 29. Consistency of the internal environment: _____
- 30. Inflammation of the pituitary gland: _____

Answers to Assignment 5

A 65 years old man was referred to the **endocrinologist** because he complained of **weight loss**, **polydipsia** and **polyuria**. General physical examination revealed weak **peripheral pulses** and slight **pitting edema** of his legs. The arteries in the limbs felt thickened and **atherosclerotic**. Ophthalmoscopic examination also revealed that the patient had **retinopathy**. Blood and urine tests were ordered. The **fasting blood sugar** was 180 mgs per 100 mls. The urine analysis showed that the patient had **glucosuria** and **ketonuria**. He was an obvious case of **Diabetes mellitus**. The blood for **renal function tests** revealed **creatinemia** and **hypernitremia**. His **nephropathy** and **atherosclerosis** explained why he also had **hypertension**. The patient was admitted for further follow-up and treatment.

Answers to Assignment 6

A young man was admitted to the medical ward with **Hypotension**, **anorexia** and **weight loss**. Blood and urine investigations revealed that he had **hyponatremia** and **hyponaturia**. Hormonal assay revealed a low level of **aldosterone**. This hormone is a **mineralocorticoid** which is secreted by the **adrenal cortex**, and is responsible for increasing **reabsorption of sodium**. The patient was diagnosed as a case of **Addison's disease**. Whether this is due to an **endogenous** cause producing **hypoadrenocorticism** or to **hypophysitis** involving the **adenohypophysis** and resulting in diminished secretion of **adrenocorticotrophin**, is yet to be found.

Answers to Quiz 21

I. Synonyms:

1. Adenohypophysis
2. Somatotropin
3. Vasopressin
4. Tetraiodothyronine
5. Testosterone
6. Hydrocortisone
7. Epinephrine
8. Hypokalemia; hypokaliemia
9. Hypercapnia
10. Nodulated
11. Thyrotoxicosis

II. Adjective:

12. Myxedematous
13. Gonadal
14. Neurohypophyseal
15. Erythropoietic
16. Diuretic
17. Ketoacidotic

III. Opposites:

18. Glucogenesis
19. Antidiuresis
20. Hypersecretion
21. Agonad

IV. Meanings:

22. Oxytocin
23. Prolactin
24. Estrogen; estradiol
25. Calcitonin
26. Glucagon
27. Glucopenia; glycopenia
28. Osteoporosis
29. Homeostasis
30. Hypophysitis