

Endocrinology.

Chapter 38

Thyroid \rightarrow AntiThyroid drugs.

P.P

Qno1 Classify Thyroid drugs.

See separate classification.

Qno2 (a) Define Thyrotoxicosis

Medical Syndrome caused by an excess of thyroid hormone.

(b) Comparison.

Thyrotoxicosis

- Warm, moist skin
- Sweating, heat intolerance
- Increase appetite
- Weight loss
- Retraction of eyelid

Hypothyroidism

- Pale, cool, Puffy
- Sensation of being cold
- Reduce appetite
- weight gain
- Drooping of eyelid

P.P

Qno 3(a) Give MOA of Propylthiouracil

Inhibit thyroid peroxidase reaction, iodine organification and peripheral conversion of T_4 to T_3 .
Better to give in pregnancy.

(b) Give MOA of levothyroxine

Activation of nuclear receptors result in gene expression with RNA formulation and protein synthesis.

Qno 4 Give adverse effect of Thioamides.

Adverse Effect

- Nausea
- GIT disturbance
- Rash
- Agranulocytosis
- Hepatitis
- Hypothyroidism.

Adverse Effect of Propranolol

- Asthma
- AV blockage
- Hypotension
- Bradycardia

ORAL contraceptive pills.

Uses

- To prevent pregnancy
- Regulate menstrual cycle
- Birth control.
- Treat acne

Adverse Effect

Estrogens

- Hypertension
- Nausea
- Headache
- Bloating

Progestins

- Weight gain
- Tiredness
- Depression
- Acne.

Contra Indication

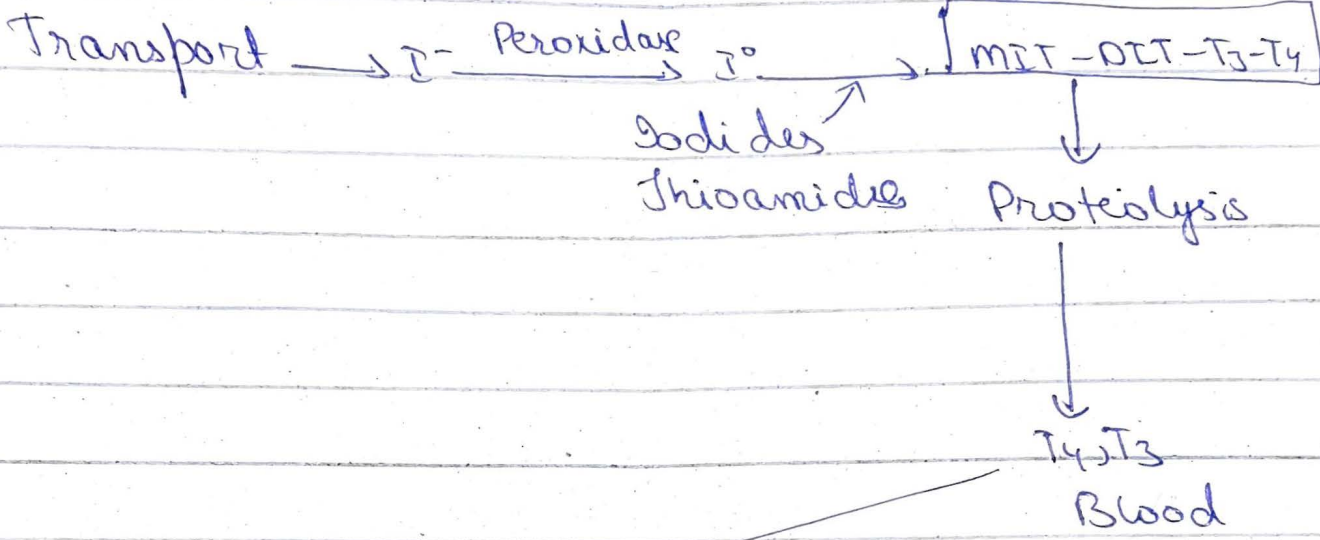
- Smokers
- Hypertension
- Breast feeding.
- Migrane.

Q/5 P.P

Pathway site of AntiThyroid drug.

Pg 317 mini K.

Thyroid gland



T₄, T₃

T₃

Radiocontrast media
β-blockers
Corticosteroids
amiodarone

Advers Effect

Thyroid Preparations

- Lethargy
- Bradycardia
- Weight gain
- Drooping of Eye lids.

Q no 6

Give metabolic Effect of
Glucocorticoids. Pg 322 mini K.

Glucocorticoids stimulate
glycogenesis. As a result
blood glucose rises muscle protein
is catabolized and insulin
secretion is stimulated. Both
lipolysis and lipogenesis are stimulated
with a net increase of fat
deposition in certain areas (e.g. face).

Immunosuppressive effect.

Glucocorticoid inhibit cell
mediated immunological functions
especially those dependent on lymphocytes.
These agents are actively lymphotoxic
and important in treatment
of hematologic cancer.

The drugs do not interfere
with development of normal
acquired immunity but delay
rejection reaction in patient.

Anti-inflammatory Effect

glucocorticoid have a dramatic suppressant effect on numerous inflammatory process.

These drug increase neutrophil and decrease lymphocytes, eosinophil, basophils and monocytes. Migration of leukocyte is also inhibited.

Qno 7 Give adrenal and non-adrenal ^{disorder} uses of glucocorticoids Pg 325 min

Adrenal disorder

- Addison disease
- Congenital adrenal hyperplasia
- Diagnosis of cushing syndrome
- During and after pregnancy

Non adrenal disorder

- Hematopoietic cancer
- Neurological disorder
- Mountain Sickness
- Asthma
- Collagen disorders
- Rheumatic disorders

Qno8 (a) Give MOA of Prednisone.

Activation of glucocorticoid receptor alter the gene transcription.

(b) Adverse effects AIE

- Adrenal suppression
- Growth Inhibition
- Muscle wasting
- Salt retention
- Glucose Intolerance.

AIEs Clinical uses

Inflammatory condition
Organ transplantation
Hematologic cancer.

Qno9 (a) Give MOA of mifepristone.

Pharmacological antagonist of glucocorticoid and progesterone receptor.

Clinical uses

Cushing syndrome
Medical abortion.

Adverse Effect

- Vaginal bleeding in females
- Abdominal pain
- GIT upset
- Diarrhea
- Headache.

Ono to write down adverse effect of glucocorticoid. Key to UHS.

- Adrenal suppression
- Growth inhibition.
- Muscle wasting.
- osteoporosis
- Glaucoma
- Glucose Intolerance
- Salt retention.

Q11 (a) Give MOA of Sulfonylureas.

MOA

- It stimulates the release of endogenous insulin by promoting closure of K^+ channel in Pancreatic B cell membrane.
- Reduction in hepatic glucose production.
- Increase in peripheral insulin sensitivity.

(b)

Adverse Effect of Sulfonylurea drugs

- Hypoglycemia.
 - Vomiting
 - weight gain
 - Nausea
 - Inappropriate ADH secretion
 - Allergic reaction.
-

Qno 12 Name 2 Sulfonylamids

Metformin

Phenformin

Buformin

Qno 13^(a) Give MOA of Tamoxifen.

Estrogen antagonist actions
in breast tissues
and CNS. estrogen effect
in liver and bone

(b) Adverse Effect

- Hot flushes
- Thromboembolism
- Endometrial Hyperplasia.
- Nausea.
- vaginal bleeding.

Qno 14 Give MOA of Clomiphene

→ Act as partial estrogen
agonist.

→ used for ovulation induction

→ Antagonist Effect in
pituitary Increase gonadotrophin
secretion

Adverse Effect

- Headache
- Nausea
- Vasomotor flushes
- Ovary Enlargement

Q15 (a) Give MOA of
Anastrozole

Reduce estrogen synthesis
by inhibiting aromatase
enzyme.

Finasteride

Inhibition of 5 α -reductase
enzyme that converts testosterone
to dihydrotestosterone.

Give A/E

Rarely Impotence
Gynecomastia.

Qno 16 Classify Oral hypoglycemic drugs

glyburide
glipizide
glimepiride
Acarbose
Miglitol
Pioglitazone.

Qno 17 Insulin Release from Pancreatic β cell Fig 41.2 Mini K Pg 343

Qno 18

Give MOA of Metformin.

- Decrease Endogenous glucose production.
- Main mechanism of action of metformin reduction of hepatic glucose output.
- Also Intestinal absorption of sugar.

AIE

GI disturbance
lactic Acidosis.