

## **Final endocrine-pathology-**

- 1- True about DM – **Type 2 are usually obese and have a family history of the disease**
- 2- Requires routine central lymph node dissection – **medullary carcinoma**
- 3- True about parathormon – **vitamin D deficiency can cause hyperparathyroidism**
- 4- Wrong about Sheehan syndrome – **associated with anterior pituitary enlargement with increased vasculature**
- 5- A woman with a unilateral enlargement in the thyroid, previous URT infection, increased lymphocyte count – **lymphocyte infiltrate with granulomatous reaction**
- 6- Not likely to be a hot nodule – **medullary carcinoma**
- 7- True about MEN syndrome – **medullary carcinoma in MEN 2 has an earlier onset than sporadic**
- 8- Doesn't cause Addison's disease – **massive adrenal hemorrhage**
- 9- Top cause of endogenous Cushing syndrome - **corticotroph pituitary adenoma**
- 10- Not a symptom of hyperparathyroidism – **tetany**
- 11- Wrong about DM – **type 2 has peripheral resistance which involves decreased glucose uptake by skeletal muscles and brain tissue**
- 12- The leading cause of death in DM is associated with what complication – **coronary artery atherosclerosis**
- 13- Picture of thyroid tumor – **medullary carcinoma**
- 14- Wrong about picture of adrenal tumor – **nuclear pleomorphism is an indicator of malignancy**
- 15- Picture of calcification – **Psammoma bodies in papillary carcinoma**

1-Addison's Disease is characterized by

- a. Lack of ACTH.
- b. Excess production of cortisol from zona fasciculata.
- c. Over production of T3.
- d. Over production of T4.
- e. Darken Skin color.**

**2-Which of the following sentence is true?**

- a. Highest levels of cortisol are at night following ACTH release .
- b. Cortisol release is same as the circadian pattern of growth hormone secretion.
- c. Lowest levels of cortisol are in early AM following ACTH release Cortisol release.
- d. Cortisol release is opposes the circadian pattern of growth hormone secretion.**
- e. None of the above.

**3-Regarding the thyroid gland which of the following is true**

- a. Cuboidal epithelium is the structural & functional units of the thyroid gland.
- b. Thyroid hormones are mainly synthesized in cuboidal epithelium.
- c. The simple cuboidal epithelium undertakes iodide production.
- d. Thyroid hormones are mainly synthesized in colloid.**
- e. All of the above

**9-In addition to its effects on stimulating glucose uptake by tissues, insulin has other physiological actions including ;**

- a. Increase hepatic glycogenolysis.
- b. Decreasing hepatic glucose storage into glycogen.
- c. Promoting hepatic gluconeogenesis.
- d. Inhibit lipolysis.**
- e. All of the above.

**18-Which of the following is False about exophthalmos?**

- a. It may lead to corneal injury.
- b. One cause is inflammatory infiltration of the retroorbital tissue.
- c. It is specific for Graves disease.
- d. It is present in all cases of Graves' disease.**
- e. It persists or progresses after treatment of thyrotoxicosis.

**19-Which of the following is most manifestation of thyroid diseases?**

- a. Follicular adenoma.
- b. Graves' disease.
- c. Hashimoto thyroiditis.**
- d. Diffuse and multinodular goiter.
- e. Papillary carcinoma.

An X ray of a 55-year-old lady showed expansion of the Sella turcica with associated bony erosions. She complained of vision problems. The MOST COMMON cause of her symptoms is:

- A- Pituitary macroadenoma, Prolactinoma type B- Pituitary microadenoma, prolactinoma type. C- Prolactinoma that can be of any size.
- D- Non-functioning pituitary macroadenoma
- E- Non-functioning pituitary adenoma of any size.

2) A 32-year-old pregnant lady delivered by a caesarean section. She lost 2 litres of blood during the operation and her systolic blood pressure dropped significantly. She developed hypothyroidism and adrenal insufficiency. Which of the following statements is CORRECT about her disease? The question describes Sheehan syndrome

- A- An X ray would show expansion of Sella turcica
- b- Her symptoms are caused by ischemic necrosis of 50% of the anterior pituitary
- C- The presence of a pre-existing large non-functioning pituitary adenoma makes her more vulnerable to develop hypopituitarism
- D- Her symptoms are caused by haemorrhage within the anterior pituitary.
- E- Her symptoms could've been better if bleeding of the same amount and duration occurred during pregnancy rather than during delivery

3) A 66-year-old patient complained of polyuria and polydipsia. His fasting blood sugar was 70 mg/dl in three occasions. A blood test of this patient will show:

- A- hypernatremia
- B- hyponatremia
- C- hypercalcemia
- D- hypocalcaemia
- E- normal calcium and sodium levels.

4) A 47-year-old woman complained of disfiguring enlargement of the neck. On examination you felt several variably-sized nodules of the thyroid gland, some of which felt cystic. Which of the following is CORRECT regarding her disease?

- A- The largest nodule is more likely to be a functional nodule.
- B- Graves disease is the most likely diagnosis
- C- If iodine scans show increased iodine uptake, then a pituitary TSH adenoma would be the most common cause
- D- Iodine deficiency is a common cause of her illness
- E- Malignant transformation is a common complication of her disease.

5) A 45-year-old woman presented with heat intolerance, diarrhoea and tremors. Iodine scans showed a single hot nodule. This patient can have which of the following signs?

- A- Wide staring gaze,
- B- Thick scaly skin patches.
- C- Exophthalmos.
- D- Coarse facial features
- E- Wide staring gaze with associated exophthalmos

6) Choose the INCORRECT statement regarding Hashimoto thyroiditis:

- A- Is the most common cause of hypothyroidism in the developed countries.
- B- There is increased risk of developing a lymphoma
- C- Follicular destruction early in the disease can result in hyperthyroidism
- D- Apoptosis of follicular cells is induced by B lymphocytes.
- E- It has a genetic predisposition

7) Hurthle cells are:

- A- large cells with eosinophilic nuclear inclusions.
- B- Seen only in Hashimoto thyroiditis
- C- An indicator of poor prognosis if seen in a thyroid adenoma.
- D- Capable of generating more ATP than normal follicular cells,
- E- Morphologically similar cells are present in parathyroid adenomas but not in normal parathyroid glands

A 30-year-old man was treated for an upper respiratory tract infection, after which he developed painful enlargement of the thyroid gland. Serologic examination didn't show any autoantibodies. Which of the following information is CORRECT about his illness?

- A- Thyroid function can return to normal within 8 weeks.
- B- Characterised histologically by lymphocytic infiltrate with associated Hurthle cells.
- C- Granulomas are a common histologic feature and are caused by macrophages trying to phagocytose viral particles.
- D- If untreated, there is a risk to develop a lymphoma
- E- Blood tests will reveal low white blood cell counts.

9) Which of the following thyroid diseases CANNOT be diagnosed by Fine needle aspiration (FNA)?

- A- Papillary thyroid carcinoma
- B- Hashimoto thyroiditis
- C- Follicular carcinoma
- D- Thyroid cyst

E- All diseases can be diagnosed by FNA

10) Which of the following situations best describes Graves disease?

A- A 44-year-old lady with diffuse bilateral thyroid enlargement, and high TSH.

B- A thyroid gland received in the lab showing cystic degeneration and colloid nodules.

C- A histology report describing diffusely enlarged gland with enlarged follicles lined by tall columnar epithelial cells.

D- A 66-year-old male with unilateral exophthalmos and diffusely enlarged thyroid gland. Exophthalmos in Graves is bilateral.

E- A patient with diffuse, symmetric enlargement of the thyroid gland that showed decreased iodine uptake

11) All the following endocrine neoplasms are matched correctly with the histological features that help in their recognition EXCEPT:

A- Parathyroid adenoma and absence of fat.

B- Malignant Pheochromocytoma and metastatic spread. C- Pituitary adenomas and polymorphic cellular appearance D- Papillary thyroid carcinoma and psammoma bodies.

E- Medullary thyroid carcinoma and amyloid deposition.

12) A 40-year-old male with a single thyroid nodule which, on histological examination, showed nuclear clearing, grooves and inclusions is more likely to have which of the following mutations?

A- Overstimulation of PIK3CA

B- Loss-of-function mutations of PTEN

C- (2;3) translocation

D- Formation of a fusion gene involving PAX8 E- RET gene rearrangement.

13) All of the following combinations regarding thyroid tumors are correct EXCEPT:

A- Anaplastic carcinoma and TP53 mutation.

B- Medullary carcinoma and calcitonin production

C- Follicular carcinoma and iodine deficiency

D- Anaplastic carcinoma and poor prognosis

E- papillary carcinoma and early hematogenous spread.

14) Which of the following is NOT a feature of primary hyperparathyroidism:

A- Hypocalcemia

B- Renal stones

C- Osteitis fibrosa cystica

D- Increased risk of peptic ulcers E- Metastatic calcifications.

15) Choose the INCORRECT statement regarding MEN 1 syndrome

- A- Inherited in an autosomal dominant fashion
- B- Pancreatic tumors occurring in MEN1 syndrome are aggressive and multiple
- C- Hyperparathyroidism is a rare manifestation
- D- Patients might have prolactinomas
- E- Pituitary adenomas occurring in MEN1 occur at a younger age compared to their sporadic counterparts

16) In which of the following causes of Cushing syndrome the adrenal glands are expected to be atrophic?

- A- Iatrogenic Cushing syndrome,
- B- Cushing disease,
- C- ACTH producing pituitary adenoma
- D- Cushing syndrome occurring as a Paraneoplastic syndrome in a patient with lung small cell carcinoma..
- E- Nodular adrenal hyperplasia.

17) All of the following are features of Addison disease EXCEPT:

- A- Hyperpigmentation..
- B- Hyperkalemia,
- C- Hyponatremia,
- D- Hypertension..
- E- Decreased aldosterone levels

18) One of the following is INCORRECT regarding differences between type 1 and type 2 Diabetes Mellitus (DM)

- A- In type 1 DM there is absolute insulin deficiency whereas in type 2 DM insulin levels can be normal.
- B- In type 1 there is autoimmune destruction of the Islets of Langerhans, whereas in type 2 there is dysfunction of the pancreatic Islets.
- C- Insulin resistant is a feature of type 2 DM resulting in decreased glucose uptake by muscle and brain tissues
- D- Free fatty acids play a major role in the pathogenesis of type 2 DM.
- E- Type 1 occurs at a younger age group than type 2 DM.

19) The leading cause of death in diabetics is related to which of the following complications?

- A- microangiopathy.

- B- Femoral artery atherosclerosis.
- C- Diabetic nephropathy
- D- Hyaline arteriolosclerosis.
- E- Coronary artery atherosclerosis

1	2	3	4	5	6	7	8	9
D	C	A	D	A	D	D	A	C

10	11	12	13	14	15	16	17	18	19
C	C	E	E	A	C	A	D	C	E

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20- what is myxoedema (maybe)?

- a. Is a term used synonymously with severe hyper activity of adrenal gland.
- b. A condition of severely stunted physical and mental growth due to untreated anemia.
- c. A condition of increased blood pressure.
- d. A condition of severely stunted physical and mental growth due to untreated congenital deficiency of thyroid hormones.
- e. Used to describe a dermatological change that can occur in hypothyroidism.

21. Which of the following is NOT a clinical manifestation of Cushing syndrome

- a. Cutaneous striae.
- b. Hypertension.
- c. Truncal obesity.
- d. Hypoglycemia.
- e. Osteoporosis.

22.- The most common cause of chronic adrenocortical insufficiency (Addison disease)

- a. Autoimmune adrenalitis.
- b. AIDS.
- c. Tuberculosis.
- d. Fungal infection.
- e. Metastatic carcinoma.

23. Which of the following is False about hyperaldosteronism

- a. It causes hypertension.
- b. Primary hyperaldosteronism is characterized by decrease renin levels.
- c. It causes hypokalemia.
- d. Secondary hyperaldosteronism can be caused by renal hypoperfusion.
- e. The most common cause of primary hyperaldosteronism is adrenocortical carcinoma.

24. Which of the following is the most common cause of endogenous Cushing syndrome?

- a. Ectopic production of ACTH.
- b. Adrenocortical carcinoma.
- c. ACTH-producing pituitary adenoma (Cushing disease).
- d. Primary adrenal hyperplasia.
- e. Adrenocortical adenoma.

25. The most common cause of death in diabetic patients

- a. Cerebral infarction.
- b. Chronic renal failure.
- c. Pulmonary edema.
- d. Myocardial infarction.
- e. Pulmonary infarction

26. Which of the following is False about diabetes Mellitus type 2?

- a. Inflammation mediated by cytokines results in peripheral resistance.
- b. Accounts for 80-90% of cases of diabetes.
- c. Low levels of free fatty acids play a role in mediating insulin resistance.
- d. Obesity is a risk factor for insulin resistance.
- e. Characterized by B-cell dysfunction.

27. Which of the following statements is False?

- a. Random blood glucose levels more or equal to 200 mg/dl means diabetes.
- b. Fasting blood glucose levels between 100 to 125mg/dl means prediabetes.
- c. Fasting blood glucose levels of more than 126 mg/dl means diabetes.
- d. HBA1C levels between 5.7 and 6.4 % means diabetes.
- e. Plasma glucose levels between 140 and 199 mg/dl on glucose tolerance test means prediabetes

28. Which of the following thyroid carcinomas is associated with previous radiation therapy?

- a. Papillary carcinoma.
- b. Poorly differentiated thyroid carcinoma.
- c. Medullary carcinoma.
- d. Anaplastic carcinoma.
- e. Follicular carcinoma

29. Which of the following is False about primary hyperparathyroidism?

- a. Most commonly caused by parathyroid adenoma.
- b. It is the most common cause of clinically apparent hypercalcemia.
- c. It causes osteitis fibrosa cystica.
- d. It can cause nephrocalcinosis.
- e. Characterized by hypophosphatemia.

30- Which of the following genes shows mutation in familial medullary carcinoma?

- a. RET.
- b. RB.
- c. P63.
- d. RAS.
- e. P53

31. Regarding actions of the corticosteroids which is true;

- a. Glucocorticoids directly inhibit cardiac output.
- b. The protein catabolic actions of the glucocorticoids result in a negative nitrogen balance.
- c. The glucocorticoids decrease blood glucose.
- d. The glucocorticoids decrease liver glycogen.
- e. Protein catabolic actions of the glucocorticoids result in a nitrogen imbalance.

32. Which of the following is False about exophthalmos?

- a. It may lead to corneal injury.
- b. One cause is inflammatory infiltration of the retroorbital tissue.
- c. It is specific for Graves disease.
- d. It is present in all cases of Graves' disease.
- e. It persists or progresses after treatment of thyrotoxicosis.

33- Which of the following is most manifestation of thyroid diseases?

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20 e	23 e	26 c	29 b	32 d
21 d	24 c	27 d	30 a	33 b
22 a	25 d	28 a	31 b	

34-The least common type of pituitary adenomas

- a. LH-Producing adenoma.
  - b. Somatotroph adenoma.
  - c. ACTH-producing adenoma.
  - d. TSH secreting adenoma.
  - e. Prolactinoma.
- D

35-Atypical pituitary adenoma is characterized by mutations of

- a. P53 gene.
- b. RAS gene.
- c. RB gene.
- d. WT1 gene.
- e. PTEN gene.

A

36-Which of the following is NOT a feature of central diabetes insipidus?

- a. Characterized by polyuria.
- b. Characterized by ADH deficiency.
- c. Hyponatremia.
- d. Can be caused by chronic inflammation of the pituitary gland and hypothalamus.
- e. The urine shows inappropriate low specific gravity.

C

37.Which of the following is a cause of thyrotoxicosis NOT associated with hyperthyroidism (thyroid hyper function)

- a. Toxic follicular adenoma.
- b. TSH producing pituitary adenoma.
- c. Toxic multinodular goiter.

- d. Thyroiditis.
  - e. Graves disease.
- D

38. Which of the following types of thyroiditis is caused viral infection?

- a. Subacute granulomatous thyroiditis (de-Quervain thyroiditis).
  - b. Palpable thyroiditis.
  - c. Subacute lymphocytic thyroiditis (Painless thyroiditis).
  - d. Chronic lymphocytic thyroiditis (Hashimoto thyroiditis).
  - e. Riedel thyroiditis.
- A

39.-Which of the following characterizes type I but not type II diabetes mellitus?

- a. Lack of insulin.
- b. Polyuria and polydipsia.
- c. Can usually be successfully managed by dietary control.
- d. Hyperglycemia

**Done by :**  
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