

Thyroid diseases

MCQs

- clinical scenario of thyrotoxicosis with low TSH level what expect to see in this pt?

Exophthalmous

- A 54-year-old woman is evaluated because of fatigue. Although she follows a daily 1400-kcal diet and exercises 3 to 4 nights per week for 30 minutes, she has gained 2.3 kg (5.0 lb) in the last month. She has hypercholesterolemia requiring statin therapy. Her mother was diagnosed with hypothyroidism shortly after the birth of her last child. On physical examination, blood pressure is 145/90 mm Hg, pulse rate is 80/min, and BMI is 25. The skin is dry. The thyroid is mildly enlarged with a diffusely nodular texture. No discrete thyroid nodules are palpated. Reflexes are normal. TSH 6.5 mU/L T4 0.9 ng/dL Thyroid peroxidase antibody positive Similar results for TSH and T4 were obtained 4 months ago. Which of the following is the most appropriate next step in management?

Select one:

- a. **Initiate lévothyroxine therapy**
- b. Measure thyroid-stimulating immunoglobulins
- c. Repeat serum TSH measurement in 12 months
- d. Schedule thyroid radioactive iodine uptake and scan
- e. Measure serum T3 and calculate the T3:T4 ratio

- Which of the following is FALSE about Graves' disease?

Select one:

- a. Low TSH, High FT4 and/or FT3
- b. Diagnosis is mainly made by the symptoms including eye symptoms and signs
- c. Family history is common
- d. **Depression and weight gain are common symptoms**
- e. It is associated with autoimmune disorders

- A patient complains of a non-tender mass over the thyroid region on the left side of her neck. Concerned about a thyroid disorder, you order the appropriate investigations. The results are as follows: TSH: 6.0, Free T4: 20.2, Thyroid antibodies: none, RAIU: No "hot" spots seen. The next investigation(s) you choose to do are?

- a. Watch and wait for 3-6 months
- b. **FNA**
- c. Surgical biopsy
- d. Trial of L-thyroxine therapy for 6 months
- e. Start propranolol

- patient with weight gain what is the most appropriate test ?

A. TSH

B. T3

C. T4

- Patient has symptoms of hypothyroid how to confirm :

(TSH)

- Correct about hypothyroidism:

a. T4 and T3 can be normal while TSH is the first to be elevated

b. Weight gain is not a sensitive parameter

- One is correct about hyperthyroidism

a. high T3, normal T4 and low TSH is well known type

b. viral infection is usually the cause of graves disease

c. toxic MNG is most common in young males

- Autoimmune thyroiditis can be confirmed by ONE of the following.

a- thyroid peroxidase antibody

b- anti-nuclear antibody

c- thyroid uptake resin

d- fine needle thyroid aspiration

e- estimation of TSH

- A 42-year-old female presents with a recent onset of fatigue, malaise, constipation, and a 12-pound weight gain. On examination, her thyroid is firm and enlarged. What ONE laboratory test is most likely to confirm the expected diagnosis?

a- Antithyroid antibodies

b- Serum thyroid-stimulating hormone (TSH) measurement *****

c- Serum thyroxine (T4) measurement

d- Serum triiodothyronine (T3) measurement

e- T3 resin uptake

- False statement :

Hyperthyroidism can occur in Hashimoto thyroiditis

Lid retraction can be in any hypothyroidism disease **

- Myxedema coma all except :

-it has mortality rate higher than thyroid storm

- A 42-year-old woman is evaluated during an annual physical examination. She feels well. She has no pertinent personal or family medical history, and she takes no medications. On physical examination, vital signs are normal. Palpation of the thyroid reveals a possible nodule in the right lobe that is not mobile with swallowing. The remainder of the gland is unremarkable, and there is no palpable cervical lymphadenopathy. Other physical examination findings are normal. Laboratory studies reveal a serum thyroid-stimulating hormone level of 1.7 pU/mL (1.7 mU/L). Ultrasound of the neck shows a right 1.5-cm hypoechoic nodule with internal microcalcifications. Which of the following is the most appropriate next step in management? Select one:

a. CT with contrast of the neck

b. Fine-needle aspiration of the nodule

c. Lévothyroxine therapy

d. Measurement of serum thyroglobulin level

e. Thyroid scan with technetium

- A 22 year old student is diagnosed with Grave's disease. She enquires about the long term complications of radioactive iodine, which is being considered What side effect is most likely?

Select one:

a Hypothyroidis

b. Hyperthyroidism

c. Hyperparathyroidism

d. Thyroid malignancy

e. Recurrent laryngeal nerve damage

- Which of the following is not associated with thyroid disease?

a. Dermatitis herpetiformis

b. Urticaria

c. Porphyria cutaneatarda

d. Vitiligo

e. Alopecia areata

- Which of the following is true of Myasthenia Gravis?
 - a. In patients older than 60, A. Thymic hyperplasia is a common etiology
 - b. Often associated with thyroid disease**
 - c. Antibodies that are produced against acetylcholinesterase
 - d. Associated with small cell lung carcinoma
 - e. Can lead to renal failure

- Which of the following is associated with thyroid disease?
 - a. Neurofibromatosis
 - b. Vitiligo**
 - c. Erythema nodosum
 - d. Pemphigus vulgaris
 - e. Ichthyosis vulgaris

- A 30 years old lady have history of weight gain and hoarseness of voice . On examination her pulse 60 beat per minute and pale, dry skin. The most important investigation is?
 - a- ACTH
 - b- Cortisol level
 - c- Gonadotropin levels
 - d- Insulin like growth factor
 - e- Thyroid function test**

- Thyroid disease without nodule: **Hashimoto's thyroiditis**

- Most common thyroid cancer : **(papillary)**

- Wrong about hypothyroidism:
 - a. Antibodies are positive only in 70% of patients with Hashimoto's thyroiditis.**

- ONE of the following is most likely diagnosis for patient with thyroid function test showing elevated serum T4 and low radioactive iodine uptake.
 - a- Grave's disease.
 - b- Hashimoto's thyroiditis.
 - c- subacute thyroiditis.**
 - d- non-toxic goiter.
 - e- pregnancy.

- A patient with palpitations and heat intolerance... technecium scan revealed uniform increased uptake in the thyroid, diagnosis is:

A. Graves' disease

- Best treatment of fibrillation in hyperthyroidism is:

A. Anti-thyroid drugs.

Atrial fibrillation occurs in 10 to 20 percent of patients with hyperthyroidism, and is more common in elderly patients. In one study, 8 percent of all patients and 15 percent of patients between ages 70 to 79 developed atrial fibrillation within 30 days of the diagnosis of hyperthyroidism [8]. Even subclinical hyperthyroidism is associated with an increased rate of atrial ectopy and a threefold increased risk of atrial fibrillation ([figure 1](#)) [9].

- Autoimmune thyroiditis can be confirmed by ONE of the following.

a- thyroid peroxidase antibody

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d- fine needle thyroid aspiration

e- estimation of TSH

- A 40-year old man post thyroidectomy for medullary thyroid carcinoma presents with hypertension and complains of attacks of severe headache and palpitations. He is noted to have glycosuria.

Which ONE of the following is most likely cause of his hypertension.?

a- Cushing syndrome.

b- Primary hyperaldosteronism.

c- Essential hypertension

d- Pheochromocytoma*****

e- Polyarteritis nodosa.

- In hyperthyroidism Atrial fibrillation is best treated with?

a. Quinidine

b. Digitalis

c. Digitalis and quinidine

d. Pronesty

e. Antithyroid drugs

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- All the following can cause high prolactin level Except.

a- prolactinoma

b- acromegaly

c- polycystic ovary syndrome

d- metacopramide

e- hyperthyroidism.*****

- What is the most common cause of hypothyroidism worldwide? Select one:

a. Autoimmune disease

b. Graves' disease

c. Iatrogenic causes

d. Iodine deficiency

e. Medication side effects

- Cause of galactorrhea,

primary hypothyroidism

- cause of hypothyroidism ?

Auto immune or iodine def.

- A 74-year-old woman is evaluated in the emergency department for several hours of altered mental status. She is from out-of-state and is visiting with relatives. One of her young relatives was recently ill with gastrointestinal symptoms. The patient developed anorexia 3 days ago and vomiting 2 days ago. She has been unable to tolerate any liquid or solid foods for the last 24 hours. Medical history is significant for type 2 diabetes mellitus, hypertension, hyperlipidemia, and hypothyroidism. Medications are aspirin, lisinopril, glimepiride, levothyroxine, and atorvastatin. Her last dose of medications was 48 hours ago. On physical examination, her temperature is 37.5 °C (99.5 °F), blood pressure is 115/65 mm Hg, and pulse rate is 95/min. She is arousable but confused. Mucous membranes are dry. Her neck is supple. Cardiac examination reveals no murmurs. Her chest is clear to auscultation. Bowel sounds are present, and mild tenderness to palpation is noted throughout the abdomen. There is no rebound or guarding. There are no focal neurologic deficits. Laboratory studies are pending. Which of the following is the most likely cause of this patient's altered mental status?

Select one:

- a. Cerebrovascular accident
- b. Hypoglycemia
- c. Hypothyroidism
- d. Statin toxicity
- e. Dehydration related hypotension and hypoperfusion

Mini-OSCE

Q 15

This patient came to you complaining of condition that her neighbors also have (I don't know the relation)

- What is the diagnosis ?

Hypothyroidism

- What tests would you do to confirm diagnosis ?

TSH , T4

Thyroid US

Iodine uptake

- What is the treatment ?

Levothyroxine



Q12: Patient with enlarged non tender neck mass, fever, tremor and weight loss. (given values of low TSH and elevated T3 and T4). What is the most likely diagnosis:

- **Graves disease**
- Hashimoto thyroiditis
- Multinodular goiter
- Toxic adenoma
- Thyroid cancer



Q13: Patient with enlarged non tender neck mass, fever, tremor and weight loss. (given values of low TSH and elevated T3 and T4). Next step to confirm diagnosis is:

- **Radio Iodine uptake scan**
- Thyroid US
- Fine needle aspiration



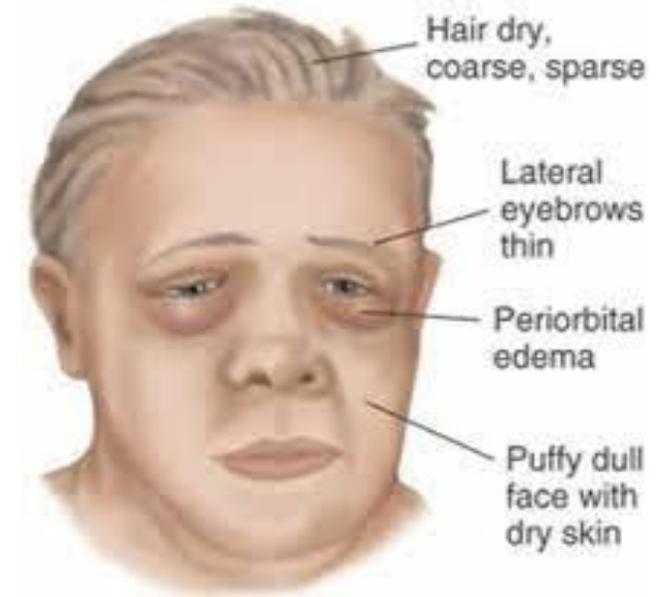
Station 2: A patient presented with fatigue, cold intolerance, weight gain ...

1) What is the diagnosis?
Hypothyroidism

1) List two signs shown in this picture?
Puffy face – periorbital edema

1) What are the investigations done to confirm your diagnosis?
TSH as primary test

Additional tests: Estimation of free T3 and T4 Test for thyroid autoantibodies Thyroid scan/ultrasonography Serum cholesterol-increase in hypothyroidism



Station 8

Post parathyroidectomy pt. with this ECG :

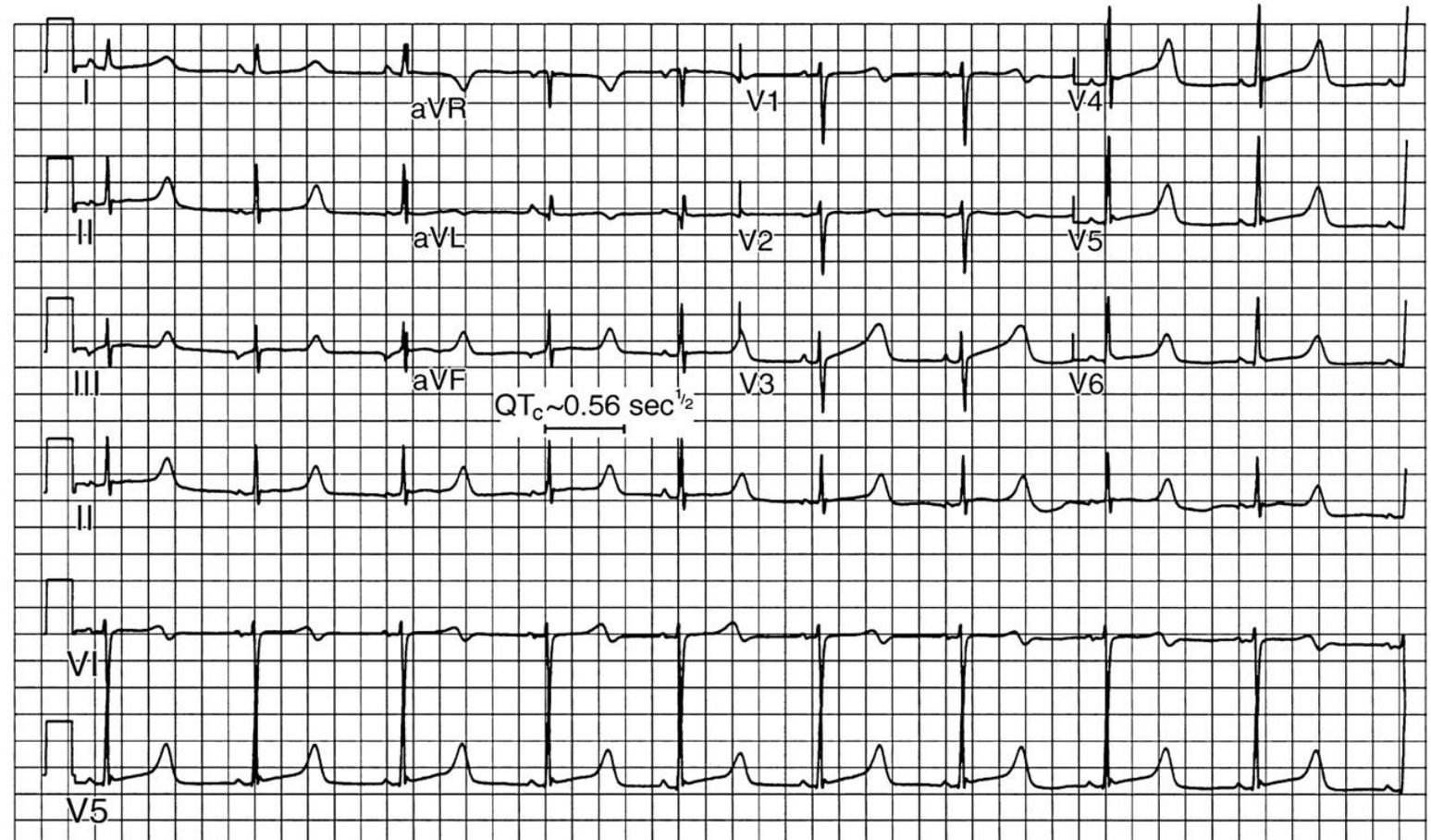
Q1 :Mention abnormality

- Long QT interval

Q2: mention 3 conditions are associated with this ECG?

- hyperphosphatemia
- Hypocalcemia
- Hypomagnesemia

NOT SURE :/

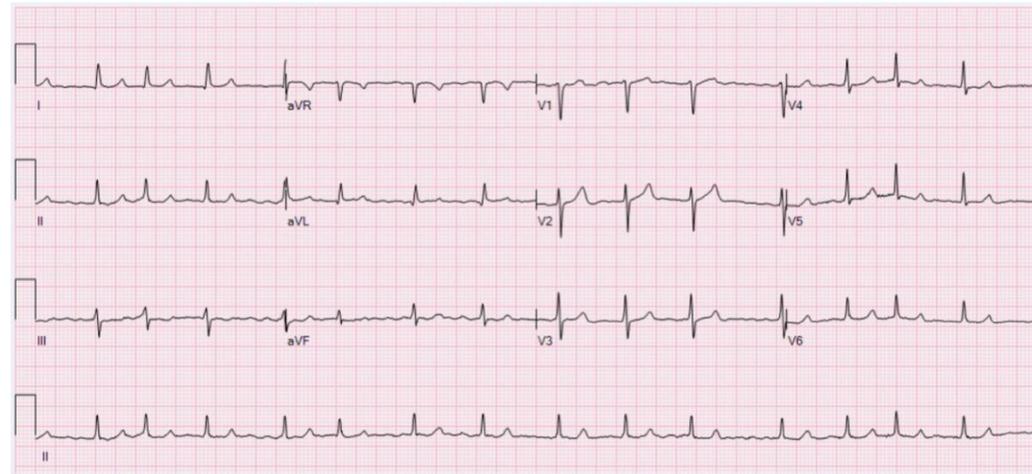


2-This shown abnormality can be seen in all these disorders except ?

- a. Congestive heart failure
- b. Chronic kidney disease
- c. Diabetic nephropathy
- d. Dilated cardiomyopathy
- e. **Hyperthyroidism**



A case of palpitation



Q1 \ what is the ECG finding or what is the diagnosis?

Atrial fibrillation

Q2 \ mention 2 possible causes?

1- hyperthyroidism

2- mitral stenosis

Q3 \ what is the treatment of choice?

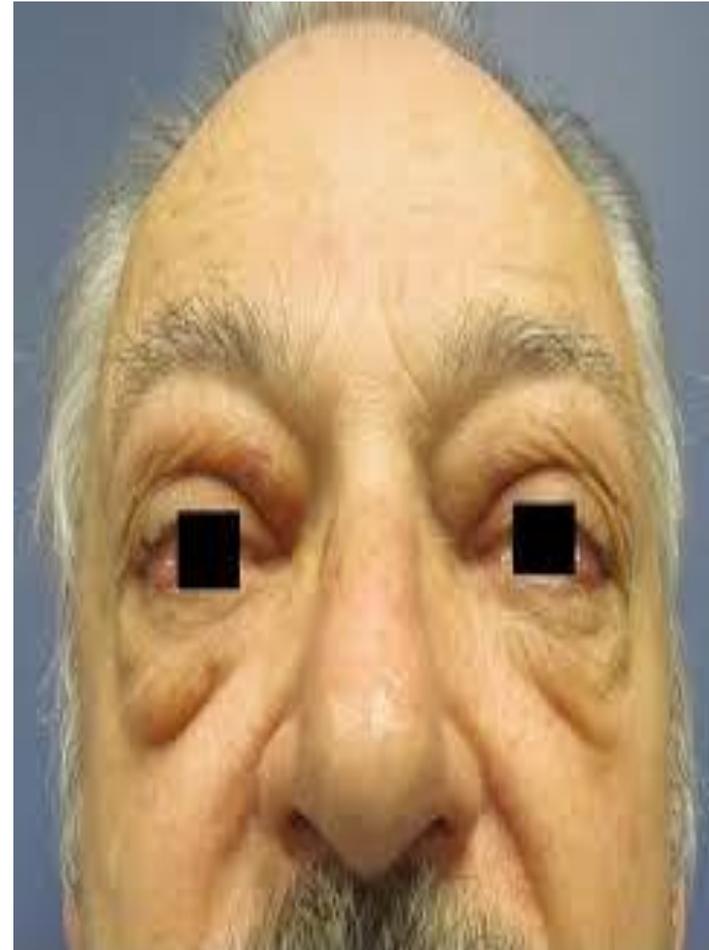
cardioversion & foci ablation

Q3: This patient with BP 130/90 , Normal Urinalysis , weight gain , Constipation

How To Diagnose ? And what is your diagnosis ?

-TSH test

-Myxedema





A 43-year-old female patient presented with a 1-year history of palpitation, fatigue, and hand tremor and weight loss

- 1) What you see in this 2 picture (exophthalmos /acropachy)
- 2) what is your diagnosis (graves disease)
- 3) give me 2 lab order for this case (T3/T4. TSH levels)

Station 10

Q1 : what is the cause of this sign

Hypocalcemia

Q2 : what is your Tx?

IV calcium gluconate

