

## CASE 6

A 40 year old female is being referred for persistent fatigue, weakness and 15-pound weight gain despite a trial of diet and exercise.

Meds: None

Past surgical history: none

Vitals:

**Temp:** 98.8°F

**Pulse:** 90, regular

**Blood pressure:** 160/98

**Respiratory rate:** 16 breaths per minute

**Oxygen saturation:** 99% room air

HEENT examination: facial plethora, positive supraclavicular fat pads present, hyperpigmentation of the neck

Abdomen: truncal obesity, purple striae present on the abdomen

Extremities: proximal muscle atrophy, thin extremities, scattered ecchymosis on the legs, positive acanthosis nigricans seen in the axillae.



### **LABORATORY EVALUATION**

A basic metabolic panel is within normal limits.

24-hour urinary free cortisol level: 178 nmol/d (upper range of normal 110-138 nmol/d)

1-mg overnight dexamethasone suppression test: cortisol is 330 nmol/L (normal 50 – 200 nmol/L)

8-mg overnight dexamethasone suppression test: 56% reduction of baseline serum cortisol

### **QUESTION 1**

Based specifically on the laboratory findings, which of the following is the most likely etiology?

- Exogenous corticosteroid therapy
- Presence of a benign tumor of the pituitary gland secreting adrenocorticotrophic hormone
- Presence of a benign cortisol-secreting tumor of the adrenal cortex
- Autoimmune destruction of the adrenal cortex
- Presence of an ectopic adrenocorticotrophic hormone-secreting tumor in the lung

**QUESTION 2**

Based on Question 1, which of the following would most likely also be seen in the patient in Case 6?

- a. Decreased ACTH levels
- b. Decreased serum glucose levels
- c. Increased ACTH levels
- d. Increased CRH levels
- e. Increased serum potassium levels

**QUESTION 3**

Based on the laboratory findings, which of the following is next recommended step in the diagnostic evaluation of the patient?

- a. MRI of the abdomen
- b. MRI of the pituitary
- c. CT scan of the lung
- d. MRI of the thorax
- e. Insulin-like growth factor 1 levels

**QUESTION 4**

Which of the following is the recommended first line management based on Question 3?

- a. Transsphenoidal resection of the pituitary tumor
- b. Surgical resection of the pulmonary tumor
- c. Gradual tapering of the corticosteroids
- d. Surgical resection of the adrenal tumor
- e. Radiation therapy of the pituitary tumor

**QUESTION 5**

Which of the following is not considered an action of cortisol?

- a. Increased gluconeogenesis
- b. Increased protein (ex. muscle) breakdown
- c. Increased insulin sensitivity
- d. Maintenance body homeostasis during times of stress
- e. Weak mineralocorticoid effects

**QUESTION 6**

Which of the following is the most common overall cause of Cushing's syndrome?

- a. Chronic corticosteroid use
- b. Cushing's disease
- c. Abrupt withdrawal of chronic steroids
- d. Adrenal adenoma
- e. Ectopic ACTH producing tumor

**QUESTION 7**

Which of the following is the most common cause of endogenous Cushing's syndrome?

- a. Chronic corticosteroid use
- b. Cushing's disease
- c. Abrupt withdrawal of chronic steroids
- d. Adrenal adenoma
- e. Ectopic ACTH producing tumor

**QUESTION 8**

Which of the following additional tests could also be used in the screening of a patient with suspected Cushing's syndrome?

- a. 24 hour urinary free cortisol
- b. Glucose suppression test
- c. ACTH stimulation test
- d. CRH stimulation test
- e. Vasopressin challenge test

**QUESTION 9**

Which of the following visual changes would be MOST likely seen if the conditions worsens in the case presented?

- a. Central vision loss
- b. Unilateral vision loss
- c. Bitemporal heteronymous hemianopsia
- d. Contralateral homonymous hemianopsia
- e. Contralateral superior quadrantanopia

**QUESTION 10**

Which of the following labs would be most consistent in a patient with Cushing's syndrome caused specifically by an adrenal adenoma?

- a. Increased serum CRH levels
- b. Hyponatremia
- c. Suppression of cortisol production on high dose dexamethasone suppression testing
- d. Decreased serum ACTH levels
- e. Hypoglycemia

**Final**

**answer????????????????????**

**?????????? Scroll down.....**

**CUSHING'S SYNDROME DUE TO  
CUSHING'S DISEASE (PITUITARY  
ACTH-PRODUCING ADENOMA**

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Based on Question 1, which of the following is also expected to be seen in this patient?

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- d. **Decreased serum ACTH levels**
- e. Hypoglycemia

**GREAT JOB!! 😊**

**All my best  
Dwayne**

**If you want to read more about this topic, check these pages out in the book Pance  
Prep Pearls:  
Cushing's syndrome page 290**

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