

How can someone's entire skin change color?

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Abstract

One of the most important differential diagnoses that not to be missed in patients with hyperpigmentation changes in the skin is Addison's. The diagnosis of the disease is relatively difficult, and its misdiagnosis leads to dangerous morbidity and even mortality. It confirms by cosyntropin test.

KEYWORDS

Addison's, diagnosis, hyperpigmentation, skin color

1 | QUESTION

A 21-year-old woman presented with nonspecific complaints including fatigue and dizziness. Her parents reported a change in her skin tone starting 2 years' prior which made her skin much darker (Figure 1). What is your clinical diagnosis?

2 | ANSWER

The key clinical point of this case is the change in color tone which happens when patient has high amounts of ACTH. Upon questioning, she also admitted to yearning for salt. We admitted her for a workup of Addison's disease, and a cosyntropin test was performed. Laboratory tests for adrenal insufficiency were as follows: 8:00 AM cortisol of 2 pg/mL (normal, 8 pg/mL), cosyntropin test of 4 mcg/dL (normal, 18 mcg/dL) with ACTH response level of 3728 pg/mL (normal 80 pg/mL) which showed definite adrenal insufficiency. Fludrocortisone was administered at a dose of 50 mg per day for the patient. Other tests, including a head and abdominopelvic MRI, were done but no causes were found (idiopathic).

Addison's disease is an uncommon endocrine disorder with primary adrenocortical insufficiency that its prevalence is 40-60 cases per one million people.¹ One of the most

important diagnostic keys in Addison's is question about skin or *mucous membranes* hyperpigmentation. The ACTH stimulation (cosyntropin) test is one of the best laboratory tests for confirmation and assessment of adrenal cortex function.²



FIGURE 1 A, Patient's ID card before Addison's onset, B, C, D, Patient's skin hyperpigmentation after Addison's onset and before therapy

CONFLICT OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

Dr Arman Shahriari, Dr Amir Mohammad Papan, and Dr Pedram Nazari: contributed to the initial diagnostics and treatment of the patient. All authors wrote and edited the manuscript.

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