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## Establishing a Diagnosis in Cushing's Syndrome: An Individualized Approach

### Announcer:

Welcome to CME on ReachMD. This episode is part of our MinuteCE curriculum.

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### Dr. Reincke:

This is CME on ReachMD, and I am Dr. Martin Reincke.

Today I'll be discussing an individualized approach to establish a diagnosis in Cushing's syndrome. I have 3 topics: diagnostic delay in Cushing's syndrome, the laboratory testing in Cushing's syndrome, and then consideration when to use which test in which situation.

So first of all, to the delay in Cushing's syndrome. We know that currently the delay is up to 3 or 5 years until the diagnosis is finally established, and this is due to a lack of awareness, because it's a rare disease, and the symptoms may be overlapping with other quite common diseases. Another reason is that initially the symptoms may be limited, and there's progression over time in disease severity and, therefore, it is very good to repeat clinical investigation after a couple of months if you are unsure whether this patient may have Cushing's syndrome.

And finally, there's test complexity. We have several tests. All of them are good, but because of the 3 tests which are most commonly used, sometimes there's confusion when to use which test. We have to turn to point 2, 3 tests available. It's the 1-mg dexamethasone suppression test, it's a 24-hour urinary free cortisol, and it's a late-night salivary cortisol. All 3 tests, as I mentioned, are excellent. However, there are clinical situations where one test may be better than the other. Just to mention a number of examples, if you have a shift worker, late-night salivary cortisol does not work very well because it investigates the diurnal rhythm. The urinary free cortisol can be difficult to use in patients who have renal insufficiency, especially at higher grades. And the dex suppression test is not so useful in females on oral contraceptives, because test specificity may be decreased because of the binding proteins. Therefore, you have to know when to use which test.

I generally start with the late-night salivary cortisol test because it's very convenient for the patient. And in general, I do more than one test because this, again, increased test reliability. This is true for all tests, especially for the urinary free cortisol and the late-night salivary cortisol. So these tests have to be generally repeated several times.

Also, the underlying cause – and this is number 3 – of endogenous Cushing's syndrome has an impact on screening tests. For example, if you suspect which is the most likely diagnosis in endogenous Cushing's syndrome, a pituitary source, Cushing's disease, then urinary free cortisol or late-night salivary cortisol are the best tests to start with.

Multiple tests of late-night salivary cortisol or urinary free cortisol, or a combination of tests, is very useful. However, if you have adrenal Cushing's syndrome or you have an adrenal incidentaloma, then the 1-mg dexamethasone suppression test is the best test because the salivary cortisol may be normal, as is the urinary free cortisol. If Cushing's disease of pituitary origin is confirmed, then you can use any test and generally, we do multiple tests in such a situation.

I hope you found this brief overview of screening and testing in Cushing's syndrome useful. Thanks for listening.

**Announcer:**

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