



مختبر فرايبورج الطبي الشرق الأوسط (ذ.م.م.)
FREIBURG MEDICAL LABORATORY MIDDLE EAST (L.L.C.)

Update

Aldosterone-Renin Test

Aldosterone-to-Renin Ratio

The method for analyzing renin and aldosterone has changed. Both parameters are now analyzed by ChemiLuminescent ImmunoAssay (CLIA) using the DiaSorin Liaison XL; previously LCMS was used.

This means that both parameters can be analyzed from one frozen EDTA plasma sample and the turn-around time will be faster.

Depending on the pre-selection of patients, primary hyperaldosteronism (PHA) is found in approximately 3-15% of patients with arterial hypertension and in 20-30 % of patients with therapy-resistant hypertension. Causes are either bilateral idiopathic adrenal gland hyperplasia or adrenal gland adenoma. Familial forms type I and II have been identified as well. The etiology of an autonomous aldosterone elevation should be further evaluated using imaging methods.

Interpretation: The aldosterone-to-renin ratio is abnormally increased in primary hyperaldosteronism, and decreased or normal but with high renin in secondary hyperaldosteronism.

Sample material: 1ml frozen EDTA Plasma for both renin and aldosterone

Preanalytics: Collection in the morning, approx. 2 hours after waking-up (rhythm of hormone secretion), patient sitting or lying down, collection after 15 min of resting.

Method: CLIA

TAT: Germany, 5-7 days

Note: Please see the list on the following page for medication which may interfere with test results and refer to the recommendations for discontinuation before testing. Please also note the recommendations for patients with hypokalemia.



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(continued)

Recommendations for patients, who are taking medication, which may affect test results:

The following medications should be discontinued 4 weeks before testing:

Mineral corticoid antagonists (Spironolactone, Eplerenone, Drospirenone) Potassium sparing diuretics (Amiloride, Triamterene)
Licorice, chewing tobacco
Ovulation inhibitors (e.g. Ethinyl estradiol plus Drospirenone)**
Antidepressives (especially SSRI)

The following medications should be discontinued 1 week before testing:

β -blockers**
Central alpha-2-antagonists (e.g. Clondin, alpha-Methyldopa)**

The following medications should be discontinued 1 week before testing if medically advisable:

Angiotensin antagonists (Sartanes)
ACE inhibitors
Calcium antagonists of the dihydropyridine type
Loop diuretics
Renin inhibitors (Aliskiren)

The following medications have minimal influence on the aldosterone-to-renin ratio:

Calcium antagonists (Non-Dihydropyridines, e.g. Verapamil)
Vasodilators (e.g. Hydralazine)
Alpha-antagonists (e.g. Doxazosin, Prazosin, Terazosin)

** causes false positive results

Patients with hypokalemia:

An existing condition of hypokalemia should be compensated before sampling (false-negative screening).