Preeclampsia test

Screening for preeclampsia during the first trimester of pregnancy

Preeclampsia is a complication of pregnancy that arises at the beginning of the 20th week of gestation and that may signify a risk for the mother as well as for the fetus. This disorder has a relatively high frequency, affecting between 2 and 8% of pregnancies.

The cause of preeclampsia is not fully determined, but it leads to an alteration in the union of the uterus and the placenta that restricts the arrival of nutrients and oxygen to the baby. This disorder triggers a series of physiological reactions that alter the blood vessels and leads to the clearest symptoms of the disease: high arterial pressure and appearance of proteins in urine (proteinuria).

The majority of the women affected by this disorder do not suffer severe symptoms, but the women that develop eclampsia or HELLP syndrome can be affected as may be the fetus. The consequences in the severe cases can encompass the detaching of the placenta, premature childbirth, organ failure, convulsions, etc. The mortality for this cause is not frequent, but it could occur.

Preeclampsia may be developed in the first stages of the pregnancy (early preeclampsia), making it necessary to induce childbirth before the 34th week of gestation or at the end of the pregnancy (late preeclampsia). Early preeclampsia is less frequent than the late but it has more consequences on the health of the woman and of the fetus, for which reason its appearance entails more risks.

Preeclampsia screening

The current preeclampsia screening includes ultrasound parameters and the early detection of its symptoms (beginning in the 25th week or, more frequently, in the 34th).

The preeclampsia detected in the first trimester of pregnancy would allow the appropriate monitoring of the pregnant woman and the fetus.

Placental growth factor (PlGF)

The **PL**acental **G**rowth **F**actor (**PlGF**) is an angiogenic protein produced by the placenta whose synthesis is decreased in women with a high risk of suffering preeclampsia.

The combination of the PlGF levels with the arterial pressure values and ultrasound parameters allow a detection rate of early preeclampsia of around 78% with a rate of false positives of 5%.

The **Preeclampsia test** detects in maternal blood between 11 and 13+6 weeks of the pregnancy the possibility of suffering this disorder.

Scientific basis of the Preeclampsia test

The **Preeclampsia test** allows the detection in maternal blood of the PlGF level and its processing along with other relevant parameters (PAPP-A, hCG, etc.), through the use of specific software, with the obtaining of a result of high or low risk for the susceptibility of suffering preeclampsia. It must be perform between 11 and 13+6 weeks of gestation.

Indications

It is indicated in woman with singleton pregnancy, especially in those with any of the following risk factors:

- First pregnancy or first pregnancy with new partner Previous pregnancy with preeclampsia or mother who suffered preeclampsia
- Type-I diabetes
- Body mass index over 35
- Age over 40
- Multiple pregnancy
- High arterial pressure, kidney problems and/or diabetes Pregnancies by means of in vitro fertilization

The test provides additional information to those women with risk factors, calming them or putting them on alert with greater precision regarding their risk.

Interpretation of the results

Low risk result

A result of low risk means that there is a very low risk of suffering preeclampsia during the pregnancy; even so it is important to mention that it does not eliminate completely the possibility of suffering this pathology. It is important to continue with regular visits to the gynecologist for the correct monitoring of the pregnancy.

High risk result

A result of high risk means that there exists a high risk of suffering preeclampsia during the pregnancy. It is important to point out that this result does not necessarily mean that she is going to suffer this complication of the pregnancy. It is important for her to continue with the regular visits to the gynecologist, who, knowing her risk will carry out the appropriate monitoring of the gestation, being able to advise her on the possibility of administering prophylactic measures.

Requirements

Fasting is not necessary.

Sample: 2 mL serum.

Documentation: Specific Test Requisition Form.

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