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Antenatal Care

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Introduction

Antenatal or perinatal care includes medical checks and examinations of pregnant women during the pregnancy period, but in a broader sense it also includes the follow-up of patients before conception as well as after birth (the puerperium period).

During pregnancy, ultrasound examinations are usually carried out approximately once a month, but there are four important checks that give us the right data and are sufficient for those pregnancies that are considered normal and non-pathological.

In our country, medical checks of antenatal care are divided into those of primary medicine, namely maternal and secondary and tertiary medical care, which includes hospitals to which patients are instructed to perform more detailed examinations.

Purpose

With the help of these examinations, it is possible to monitor the progress of the pregnancy, to detect defects, diseases and threatening conditions for the mother and the child, to prevent and treat a number of phenomena with a negative impact, to plan the optimal time and way of birth and pregnant women are offered information and support to make the right decisions.

Method

Prenatal follow-up includes taking microbiological smears, measuring weight, blood pressure, glycemia, laboratory tests of blood and urine, determination of blood group and Rh-factor, serological analyzesests and determination of antibodies for specific infections, ultrasound and anomaly detection. There are four main ultrasound examinations:

At the beginning of the first trimester, through ultrasound, the age of the pregnancy is assessed based on the last menstrual cycle, the number of embryos, the positioning of the pregnancy (in the uterus or outside), the presence of the heartbeat; this also includes the information offered to the pregnant woman regarding the controls, progress, possible disorders, diet and supplements during pregnancy, etc.

The 1st trimester (at week 11-14) is the time to screen for fetal abnormalities. With this non-invasive method, which consists of ultrasound and biochemical data, it is intended to single out the group of pregnant women who have a higher risk of being affected by certain anomalies, such as Trisomy 18, 13 and 21, Turner's Sy, neural tube defects (spina bifida and anencephaly), or abdominal wall closure defects. With ultrasound, fetal biometry is performed and measurement of nuchal translucency -NT, which is defined as the accumulation of liquid in the neck of the fetus. The presence of the nasal bone - NB and the Doppler of the ductus venosus - DV are also considered. NT increases in fetuses with cardiac defects and chromosomal abnormalities. In 85% of cases, fetuses with trisomy 21 and aneuploidy are detected. The maximum value of NT should be 2.5 mm; that is that the risk for Sy Down is great if the value is 2.5 and above. The other method is biochemical -PRISCA (Prenatal Risk Calculation software), which is done through taking the mother's blood in which the level of hormones is measured: double marker test or Prisca 1, (between weeks 10-14) and triple test or Prisca 2 (between week 15-20) for those women who did not benefit from the double test. In Prisca 1, the level of two hormones in the mother is evaluated: free beta hCG (human chorionic gonadotropin), which if high, there is a high risk for Trisomy 18, and PAPP-A (pregnancy associated plasma protein-A), which if it is low, the chances are higher for Down Sy. With Prisca 2, the level of three hormones in mother's blood is determined: AFP (alpha-fetoprotein), the high level of which is associated with neuronal tube defects, while the low level is associated with Down Sy or multiple pregnancy; hCG - the increase of which can be a signal for the presence of Sy Down; and the third parameter is unconjugated estriol (UE) - a decreased level of which increases the risk for Trisomy 21. In the quadruple screen test, Inhibin-A is also included, the increase of which gives a high risk for Down Sy. The ultrasound and biochemical data should always be combined with the data of other factors, such as the age, weight, ethnicity of the pregnant woman, etc. It should also be mentioned that these ultrasound and biochemical markers are indicators of an increased probability for the detection of these syndromes and possible anomalies, but they do not serve to establish the final diagnosis.

If the screening is positive, to confirm the diagnosis, invasive intervention with cordoncentesis, chorionic villus biopsy or amniocentesis -AC is necessary.

The 2nd trimester (between weeks 20-22), the growth of the fetus is followed by ultrasound and the anatomy in a more detailed way, the morphology of the organs and tissues is seen. It also excludes the possibility of various anomalies, such as Down syndrome, the placenta and its insertion, the umbilical cord and the length of the cervix are analyzed. If the screening is suspicious, amniocentesis is recommended (taking amniotic fluid with a needle, under continuous ultrasound control), through this 99% of some chromosomal disorders such as Down, Turner and Klineferter are detected. Many genetic disorders can also be detected, such as cystic fibrosis.

The 3rd trimester is the part where the development and proportional growth of the fetus is followed, the dopplers of the different arteries in the mother and the fetus are performed, the maturity of the placenta and the amount of amniotic fluid are evaluated. After the 34th week, cardiotocography - CTG is performed, which records the fetal heart rate and the intensity and duration of uterine contractions. Non-stress test is a non-invasive method that is used in the third trimester, applying oxytocin infusion in order to cause uterine contractions and at the same time to evidence the fetal reaction to such a situation.

Conclusion

All pregnant women who use the follow-up of their pregnancy through the methods of medically determined norms, have a lower rate of morbidity and mortality, progress and a more positive outcome compared to those who do not use them or do not have access to these medical services.