

Different types of Hormones Present in Woman Body During Pregnancy**Ruchita Bawankar¹, Rajdeep Nath², Shaswatee Ghosh³**¹Associate Professor, Datta Meghe Medical College, Nagpur, Maharashtra, India²Assistant Professor, Datta Meghe Medical College, Nagpur, Maharashtra, India³Associate Professor, Datta Meghe Medical College, Nagpur, Maharashtra, India

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Abstract:

Hormones are chemical messengers that are released directly into the circulation and distributed to organs and tissues throughout the body to carry out their activities.” They have a wide range of effects on biological functions and processes. Food metabolism, Sexual function, Reproductive development and health, cognitive function and mood, body temperature, and thirst are all factors to consider of development and growth. The two main female sex hormones are oestrogen and progesterone. The three primary estrogens found in the human body are estradiol, estrone, and estrinol. During puberty, these substances interact to guarantee fertility and encourage the development of suitable female sex characteristics Hormone assessed in the first, second or third trimester as well as hormone pregnancies are associated, according to our observational study.

Keywords: Hormones, Pregnancy, Human Chorionic Gonadotropin, Estrogen and Progesterone.**DOI:** 10.25258/ijcpr.18.8.62

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Introduction

Hormone is a kind of chemical substance produced by plants and animals that aids in maintenance of homeostasis and controls physical activity. They are thought to be delivered after being released from the glands that create them to reach their destinations in the bloodstream. Through endocrine system the hormones are released into blood stream directly. However, the concept has been broadened to encompass analogous regulating molecules that are distributed through cell membranes but not directly to the blood stream.[1]

Hormones and Their Evolution:

Hormones, history must be studied, to understand their functioning, their properties and their activities. Some jawless vertebrates for examples Lampreys and Hagfishes (Agnatha) have been showing different important aspects and characteristics of vertebrates in endocrine systems, which were undoubtedly present in fossil relatives who lived almost 500 million years ago In more advanced

creatures that have jaws (Gnathostomata), the endocrine system has evolved to include emergence of novel hormones, as well as the development of several systems, which are present in Agnathans; also, beside that substantial characteristics of functioning on specific target organ has been demonstrated, which also allows new patterns of response. [2]

During pregnancy female body goes throughout different hormonal changes, among them most of the hormones secreted are essential during pregnancy.

Hormones of Pregnancy

Human Chorionic Gonadotropin Hormone (hCG): Human ovary produces (hCG) in females. The levels of hCG increases in high amount in females during pregnancy, the increased levels can be observed significantly in different body fluids such as urine and serum in laboratory. The increased levels of said hormones contribute to the frequent nausea, frequent vomiting which is one of the

characteristics during pregnancy. Human placenta also produces lactogen during pregnancy. Another name for this is human chorionic somatomammotropin. It produces lactogen by stimulating the mammary glands, which is essential for foetus, during nursing.

Oestrogen, A hormone group that assists in the progress of feminine traits. This hormone is produced by ovaries, but during pregnancy it is also produced by placenta, in order to maintain pregnancy health. Another hormone progesterone is also essential during pregnancy, it is also produced by ovaries and placenta, it helps in maintaining healthy pregnancy by stimulating the uterine lining thickening it for implantation of fertilized eggs. For a good pregnancy, the right hormone balance is critical. Hormones are the chemical messengers present in body, it helps in transmitting information and receiving feedback. Hormones serve as chemical messengers in the body, transmitting information and receiving feedback from various tissues and organs. Hormones flow through the bloodstream and bind to proteins on cell receptors. [3]

Pre-stages of pregnancy: After fertilization, we can say embryo is present in mother's womb. The embryo is then travelled through woman's reproductive canal and settles in womb after six days. The hormones secreted in mother's womb are now supplied through blood stream to the embryo for recognize the embryo and continuing the pregnancy.[4] Human chorionic gonadotrophin can be identifying now in the female's uterine early as 7 to 9days later the conception and can be utilized as biomarker in current tests. Most frequent it has been seen urination in many pregnant ladies in beginning of trimesters, this is just because of human chorionic gonadotrophin causes more blood flow to pelvic and kidney causes to remove urine quickly in the pregnancy. Human gonadotrophin controls the level of pregnancy hormones like progesterone and

oestrogen in mother's blood passing through ovaries.[5]

Hormones During Pregnancy Have Side Consequences:

Progesterone and oestrogen should be at high level during pregnancy, if not then they can show some side effects just because they affect brain. Most common to this are mood swings just to adapt the level of hormones. Morning sickness is can strike regularly and nausea can be felt any time in day. This may cause mostly because of hormones imbalance, morning sickness could be because of more level of oestrogen and progesterone. These hormones are mostly associated with thyroid hormone, it is known as thyroid stimulating hormone, it can be seen reduced in early pregnancy. During 5 to 6 weeks' woman can start feels morning sickness and can feel till 12 to 16 weeks of pregnancy. Some woman's can feel this in their entire period of pregnancy.[6]

In first trimester, women experience pain in their pelvis and lower back. Relax in, a hormone, is mostly to accountable as it is created during pregnancy and can be detected around week 7-10. Relax in have effect in relaxing the muscles of mother during pregnancy making room for foetus growth and development. Relaxin's strongly effects pelvic region, and relaxes pain caused in pelvic joints. Because the joints are softer, some women may find it more difficult to balance. Because of the relax in and the fetus growth, there is also an increase in constipation, which is linked to less gastrointestinal motion. A Despite being unpleasant and annoying at times, all of these side effects will usually subside or disappear by the end of the first trimester.[7]

Hormone levels in low-risk pregnancies:

The hormonal environment of pregnancy may play a role in the mother's and offspring's later cancer and other chronic disorders.[8]

Hormone concentrations assessed during various stages of pregnancy may be relevant,

depending on the desired outcome. Hormone concentrations recorded early in pregnancy, while foetal organogenesis is taking place, may be significant for neurodevelopmental conditions in the offspring, but hormone concentrations obtained later in pregnancy may be more important for neurodevelopmental conditions in the children. It's possible that it has anything to do with the risk of breast cancer in women who are pregnancy, evidence that full term pregnancies are linked to malignant diseases, and ovarian tumours. [9]

In n-number of studies, it has been seen that there is a possibility of having various diseases during early pregnancy, such as screening for systemic disorders such as HIV, hepatitis, and/or rubella in women. Maternity and birth rates have been studied in several countries throughout the world. Set up to investigate the links between pregnancy and the relationship between early life exposures and health and disease outcomes in children in the age of adolescents and the mother can affect in their pregnancy. Several of the currently available are made up of samples taken only once during the first round of testing half-way through your pregnancy.[10]

Producing a blood sample later in pregnancy is difficult, with just a few collections obtaining a sample. Furthermore, only a few studies acquired blood from large groups of pregnant women in each trimester. A large research population is required whether a single hormonal measurement blood sample taken early in a healthy pregnancy is reflective of exposure throughout the pregnancy. It is not safe to be exposed during pregnancy or during a subsequent pregnancy. From a research point of view this information is useful and could aid in the better utilisation of existing maternity issues in which just one specimen is obtained during the pregnancy.

As a result, the goal of our research was to look into the relationships between

hormone concentrations recorded in serum throughout the first, second, and third trimesters of a pregnant woman and a single straightforward pregnancy, two following normal pregnancies, and to determine how well the mother is doing. Hormone levels in the first and second trimesters are used to estimate concentrations in the third trimester in a simple way. Estradiol, estrone, progesterone, prolactin, and testosterone are hormones produced by the body. Breast and ovarian malignancies have been linked to it.

Causes of Female Infertility

OLD Age: As the age rises after the age of 35 because both the number and quality of eggs get 10. This increases a chance of infertility.

Hormonal Imbalance: It can induce female infertility by altering ovulation, inhibiting uterine lining thickening, or otherwise preventing a pregnancy from developing.

PCOS/PCOD: PCOS/PCOD leads to various problem in female's body, causes direct effect in periods [Menstrual Cycle] which directly connect in infertility.

Cancer Or Tumors: In cancer surgeries reproductive organs and for pelvic cancers (such as bladder, colon, etc.) and damage these organs.

Addiction: Excess addiction of alcohol, drugs may cause serious problems in pregnancy.

Ovulatory Issues: In ovulatory issues person cannot ovulate properly which directly effect on infertility.

Conclusion

Hormone assessed in the first, second or third trimester as well as hormone pregnancies are associated, according to our observational study. Furthermore, given on one hormone measurement collected in the third trimester, certain hormone concentrations in the third trimester can be estimated to some extent.

Early pregnancy and gestational features, on the other hand, early pregnancy estimation tends to be less trustworthy. Concentrations based on late-stage pregnancy data because it is considered that pregnancy is linked to the hormonal environment of pregnancy. The hormonal environment of pregnancy is an area where further needed. The hormonal environmental of pregnancy can also be seen as future interest for investigation. disease in the mother and or children, the hormonal environmental of Pregnancy is a topic worthy of more investigation. Extensive studies that examine hormonal trends from conception through delivery should be considered

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