

Example of pregnancy essay

[Technology](#), [Development](#)



Introduction1

Physiology of Normal Pregnancy2

Germinal stage3

Embryonic stage4

Foetal stage.. 5

Placental development and function6

Uterine. 7

Structural and Functional Changes to Maternal Systems8

Maternal Physiological Adaptations of the Respiratory System9

Upper respiratory system.. 10

Thorax and Diaphragm.. 11

Maternal Physiological Adaptations of the Renal System12

Summary13

Figure 1. The left-hand duplicate displays a woman's body before she her pregnancy, and the right-hand appearance shows her body carrying a foetus full term. 14

References: 15

Introduction

A lot of the human cells are usually reproduced and then replaced throughout the life of a pregnant woman. However, the procedure does vary when it comes to the type of cell. Pregnancy has difficult effects on the physiology and anatomy of the urinary tract and renal system. These effects are basically all made to give sometime of a suitable environment for the

baby that was growing in addition to upholding the health of the mother. Equally, renal impairment has important effects on the woman's ability to conceive in addition to maintaining the pregnancy. Therefore, it is imperative to recognize the effects of pregnancy on normal renal function and the results that renal disease has on pregnancy. This supplement will speak to the effects of pregnancy on the renal system and, furthermore, talk about the effects that renal impairment has on women during pregnancy. With that said, this paper will discuss the changes that a body goes through when pregnant and how it affects the entire system of a woman.

Physiology of Normal Pregnancy

Germinal stage

Conception takes place when the female egg (ovum) is inseminated by the sperm of the man. Under certain circumstances that are normal, one egg is then on the loose around once a month from a woman's ovary for the period of a development called ovulation. The egg then goes all the its way straight into a fallopian tube, an arrangement that normally guides the egg away from the ovary in the direction of the uterus. For fertilization to happen, sperm that has been ejaculated all the way through sexual contact (or obtainable during the course of artificial insemination) in a constituent which is called semen must have made their way from the vagina all the way into the uterus (Gabrielsen, 2011 Della Grotta, 2010).

Figure 1 T The left-hand duplicate displays a woman's body before she her pregnancy, and the right-hand appearance shows her body carrying a foetus full term (Mann, 2012).

Embryonic stage

Research shows that the embryonic stage starts right after implantation and then goes on to last all the way until eight weeks after the start of the conception (Klebanoff, 2009). When implantation is finished, the cells continue to quickly split and collections of cells start taking on various purposes (known as differentiation). A procedure (gastrulation) directs into the expansion of three separate layers which are named germ layers: the mesoderm (central layer), the ectoderm (outer layer), and the endoderm (inner layer). When the embryo begins forming, every one of the germ layer distinguishes into dissimilar structures and tissues. For instance, the ectoderm ultimately develops into brain, hair, skin, nails, nervous tissue and cells, anus, tooth enamel, mouth, nose, sinuses, and other tissues. Research shows that the mesoderm develops into bones, muscles, heart tissue, lymphatic tissue, lungs, reproductive organs, and other types of tissues.

Foetal stage

The research shows that prenatal growth is the most dramatic all through the foetal stage. Once an embryo turns into a foetus at eight weeks, it is roughly 3 centimetres as far as length goes from crown to rump and usually weighs in at about 3 grams . Whenever the foetus is measured to be full-term at 38 weeks gestation, the baby could possibly be around 50 centimetres or (7. 3 pounds). Even though every one of the organ systems was shaped during embryonic formation, they persist in continuing to grow and develop all throughout the foetal stage

Placental development and function

Development of the placenta is considered to be a highly controlled process that is vital for regular foetal development and growth, and for preservation

of a healthy pregnancy. The placenta achieves numerous critical roles as the interface among foetus and mother: it stops rejection of the foetal allograft, allows respiratory gas interchange, transferences nutrients, removes foetal waste products, and secretes peptide and steroid hormones. With that said, the development of the foetus and placenta is an ongoing procedure that starts right at the time of fertilization. However, the first three days of development happen inside the fallopian tube.

Uterine

For the duration of the pre-ovulatory part, the uterus then goes through the following two phases: proliferative phase and menstrual phase. All through menstruation, the endometrial coating of the uterus starts shedding along with uterine and blood secretions. Menses, starting on day 1 of the next cycle, begins with vasoconstriction of the spiral arterioles, which then causes necrosis and ischemia.

The average period of menstrual flow goes on for exactly 4 days. Research shows that the necrotic tissue then starts releasing vasodilator substances, which causes vasodilatation. The spiral arterioles and the necrotic walls start rupturing, causing haemorrhaging and then the shedding of cells which happen over a time of exactly 4-6 days. Throughout the proliferative period, oestrogens start stimulating mitosis of the stratum basal (endometrial proliferation), which renews the stratum functional (Andersen, 2008).

Structural and Functional Changes to Maternal Systems

Many are unaware that the parental physiological alterations going on in prenatal period are the usual variations that that females go through during the time of gestation to better hold the foetus or embryo (Andersen, 2008).

They are modifications that are physical, which means, they are totally regular, and comprise of cardiac, hematologic, renal metabolic, and respiratory variations that turn out to be extremely vital unexpectedly of difficulties. The body must change its homeostatic and physiological instruments in prenatal period to make sure the foetus is being taken care of. Increases of breathing, cardiac output in blood sugar are all necessary. It is important to understand that the levels of oestrogens and progesterone raise repeatedly all during pregnancy, overpowering the hypothalamic alignment and afterward the menstrual sequence. The placenta and the woman likewise create numerous hormones. It should also be noted that the body will have to alter its homeostatic and physiological devices in prenatal period to make sure the baby develops the right way and then gets right nutrition. Also required are the upsurges in breathing, blood sugar, and cardiac output.

The major hemodynamic changes induced by pregnancy have something to do with an upsurge in water, cardiac output, and sodium retention which guiding to blood capacity development, and declines in systemic vascular resistance and systemic blood pressure. All of these changes that take place early in pregnancy reach their peak all through the second trimester, and then stay fairly constant all the way until distribution. They contribute in making sure the best development and growth of the foetus are assisting in protecting the mother from all of the dangers of delivery, for instance haemorrhaging which can be fatal for any woman. Knowledge of these cardiovascular adaptations is really necessary in order to properly interpret cardiovascular and hemodynamic tests in the woman with cardiac disease,

and also get a better understanding how the foetus will become affected by maternal cardiac conditions.

The cardiovascular changes that are connected with normal pregnancy will be looked at here. When women are pregnant they normally experience changes in their endocrine system. Levels of oestrogens and progesterone start rising frequently during the course of pregnancy, shutting down both the hypothalamic axis and not to mention successively the woman's menstrual cycle. Oestrogen is mostly fashioned by the placenta and is connected with foetal well-being. Females likewise experience improved human chorionic gonadotropin (β -hCG); which is basically being shaped by the placenta (Lillycrop, 2012).

The progesterone production, which is increased, mainly functions as a relaxer to smooth the muscle. Then, prolactin levels start increasing because of the maternal pituitary gland expansion by 50% (Grotta, 2010). This facilitates some kind of an alteration in the construction of the mammary gland that actually derives all the way from the ductal on the way to lobular-alveolar.

Parathyroid hormone is enlarged leading into accumulations of calcium acceptance in the stomach and reabsorption by the organ called the kidney. Adrenal hormones for instance aldosterone and cortisol also rise. Human placental lactogenic (hPL) is fashioned by the placenta and inspires acid that is fat metabolism by the woman and lipolysis, supporting blood glucose for utilization by the baby. (Surra, 2009)

Maternal Physiological Adaptations of the Respiratory System

Numerous changes take place in the respiratory system when women are

pregnant. Physical changes and Hormones because of the growing foetus can affect the lower and upper respiratory tracts. Some of the typical changes that take place in the respiratory system with pregnancy consist of the following:

- nosebleeds stuffy and runny nose
- expansion of the rib cage
- mounting undertaking of the diaphragm, the large flat muscle utilized for respiration, positioned right beneath the lungs
- rise in the quantity of air breathed in and out
- condensed lung capacity
- enlarged oxygen utilization

On account of these changes, numerous women feel short of breath or have some trouble breathing as pregnancy develops. When lung diseases improve or there is a pre-existing condition for instance asthma, the lungs may have trouble when it comes to recompensing.

There is a moderate rise in functional residual capacity that happens during pregnancy, attributed to a reduction in both residual volume and expiratory reserve volume . This is chiefly the result of upward development of the maternal diaphragm. Maternal tidal volume goes up by 40% in pregnancy, and this rise results in hypopnea and maternal hyperventilation . For the reason that maternal respiratory rate does not alter throughout pregnancy, the 40% to 60% increase in minute ventilation that is recognized as early as the first trimester is credited to this rise in tidal volume by itself. Research shows that increased minute ventilation may be the outcome of much more progesterone and a rise in the basal metabolic rate.

Upper respiratory system

Histologic analysis of the upper respiratory mucosa throughout pregnancy displays hyperaemia, glandular hyperactivity, which is an increased phagocytic activity content (Nabulsi, 2008). Pregnant women frequently experience epistaxis and nasal stuffiness and, possibly as a result of these adjustments.

Some women grow benign growths in the nose when they get pregnant, leading to nasal congestion and variable amounts of epistaxis . Research shows that this tumour, which is normally most of the time autonomous, is called nasal granuloma gravid arum, which is known as the pregnancy tumour. Histologic discoveries are similar to those in pyogenic granuloma. Nasal granuloma gravid arum goes away by itself after delivery in a lot of the cases.

Thorax and Diaphragm

Research shows that changes in the abdomen and thorax appear to happen early on in pregnancy. In the first trimester, the subcostal angle starts changing from 70 to as much as 104 degrees the diaphragm goes up by up to 5 cm, and the chest diameter can go up 2 cm or even more .

Diaphragmatic excursion is not restricted by the uterus, and really increases by up to 2 cm . The net outcome of these changes is a more " barrel chested" exterior when the woman is pregnancy.

Maternal Physiological Adaptations of the Renal System

Understanding pregnancy outcomes when it comes renal function is linked to physiologic changes in systemic hemodynamic and renal (Nabulsi, 2008).

Getting awareness concerning these changes is important when measuring

pregnant women that have renal disease. Disorders that cause acute kidney injury in late or early pregnancy usually fall into very different groups, and it must also be understood that pregnancies in women with underlying chronic kidney disease who need dialysis throughout pregnancy or who have before underwent renal transplantation pose exclusive sets of matters.

Understanding the physiologic changes and ailments that happen in women with renal disease in pregnancy shapes the foundation of correct management of these rare ailments.

In an ideal world, women with systemic diseases or kidney disease that would put them at risk throughout pregnancy should accept preconception counselling from physicians well-informed about the existing literature associated to pregnancy. Positive maternal and foetal results for women with pre-existing kidney disease, and those with beginning of kidney disease throughout pregnancy, have need of a close working relationship among all doctors involved in the care of these patients.

The group of physicians who are caring for these patients is normally led by a specialist that is experienced in high-risk, maternal-foetal obstetrics functioning with a nephrologist and/or other doctors. Nonetheless, close communication among all the team members is an important factor in make the most of the likelihood of best outcomes. In the bulk of pregnancies renal conditions are asymptomatic. Still, during pregnancy renal disease could be analysed by irregular urinalysis or the onset of hypertension. It is significant that all patients with proteinuria or hypertension must be further examined for renal disease. This disease is prevalent in a lot of women and is something that needs to be monitored it pregnant women.

Summary

It is evident that when it comes down to women being pregnant, the body goes through a lot of different changes. Nurses and Physicians need to understand the simple concepts of maternal physiology and foetal physiology. It is apparent that the physicians will need to care for the mother and reflect the potential opposing effects that therapeutic and diagnostic interventions might have on the foetus. The changes in structural and functional changes are essential to understand especially with the respiratory system. When it comes to physical adaptations, numerous changes take place in the respiratory system when women are pregnant. It is understood now that physical changes and Hormones because of the growing foetus can affect the lower and upper respiratory tracts. When it comes to structural changes, it is obvious that the body must do things such as change its homeostatic and physiological instruments in prenatal period in order to make sure the foetus is being taken care of. Increases of breathing, cardiac output in blood sugar are all necessary. Also, it is very important to learn that the cardiovascular changes that are connected with normal pregnancy is something that many are not aware of if they are not familiar with pregnancy. When women are pregnant they normally experience changes in their endocrine system as well as other modifications in the body.

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