NAME: MUSA FAUZIYA ISAH

MATRIC NO: 18/MHS02/116

DEPARYMRNT: NURSING SCIENCE

ELUCIDATE THE PHYSIOLOGICAL ADAPTATIONS OF THE FEMALE TO PREGNANCY

SKIN CHANGES

A number of changes take place in the skin of pregnant women. Mechanical stretching of the skin over the abdomen and breasts can lead to striae. The increased levels of estrogen and progesterone have also been implicated. Usually striae remain permanently with some change in color. Prevention may be achieved with moisturizing creams, especially those containing lanolin and other oily substances. It should be realized, however, that striae may develop despite any preventative measures.

CHANGES IN THE GASTROINTESTINAL SYSTEM

Nausea and vomiting are the most frequent implaints involving the gastrointestinal system and usually happen in early pregnancy while heartburn happen primarily in late pregnancy. The gums become hyperemic and dematous during pregnancy and tend to bleed. The muscular wall of the esophagus is relaxed and this may cause reflux, which in turn can lead to esophagigtis and heartburn. The stomach and the intestines have decreased motility presumabely due to the effect of progesterone on smooth muscle contractility. This causes an increase in the time that it takes for the stomach to empty. Reduced gastric secretion has also been documented and it could account for the improvement of peptic ulcers sometimes observed in pregnancy. Decreased motility of the large intestine may lead to constipation.

CARDIOVASCULAR CHANGES

Of all changes that happen in pregnancy, the single most important is the one involving the cardiovascular system. Adequate cardiovascular adaptation secures good placental development and thus appropriate fetal growth.

In brief, the cardiovascular changes involve a substantial change in the blood volume, cardiac output, heart rate, systemic arterial blood pressure, systemic vascular resistance, oxygen consumption and alterations in regional blood flow of various organ systems.

BLOOD VOLUME

Significant increases in the blood volume start taking place in the first trimester and continue until the mid third trimester, at approximately the 32^{nd} to the 34^{th} week. Beyond this point in gestation, the blood volume plateaus. This pattern was established with studies that kept the patient in the left- lateral position o avoid vena cava compression. However, studies that kept the patient in the supine position had controversial results indicating a decline in the blood volume after 34 to 36 weeks.

CARDIAC OUTPUT

It has been well established since the beginning of this century that the cardiac output increases an average of 50 percent during pregnancy. It is generally accepted that cardiac output begins to rise during the first trimester, probably around the tenth week of pregnancy and continues to rise up until the 24^{th} week of gestation. Once it reaches the peak it stays rather stable. That was the case in most if not all of the studies that placed women in the supine position have shown a rather false reduction in cardiac output which was primarily mediated by inferior vena cava compression.

HEART RATE DURING NORMAL PREGNANCY

The baseline heart rate increases by about 10 to 20 beats per minute. This increase starts early in pregnancy and gradually continues to go upward with the highest values achieved at term. Some investigators, however, suggested that the total increase happens early in pregnancy and remains so throughout the reminder of gestation.

In twin gestations, the rise of the heart rate is more pronounced and it can reach as much as 40 percent above the non-pregnant state. A change also from the supine position to the lateral position may cause the heart rate to drop slightly.