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MEAN BIRTH WEIGHT OF NORMAL PREGNANT FEMALES IN AIN SHAMS MATERNITY HOSPITAL

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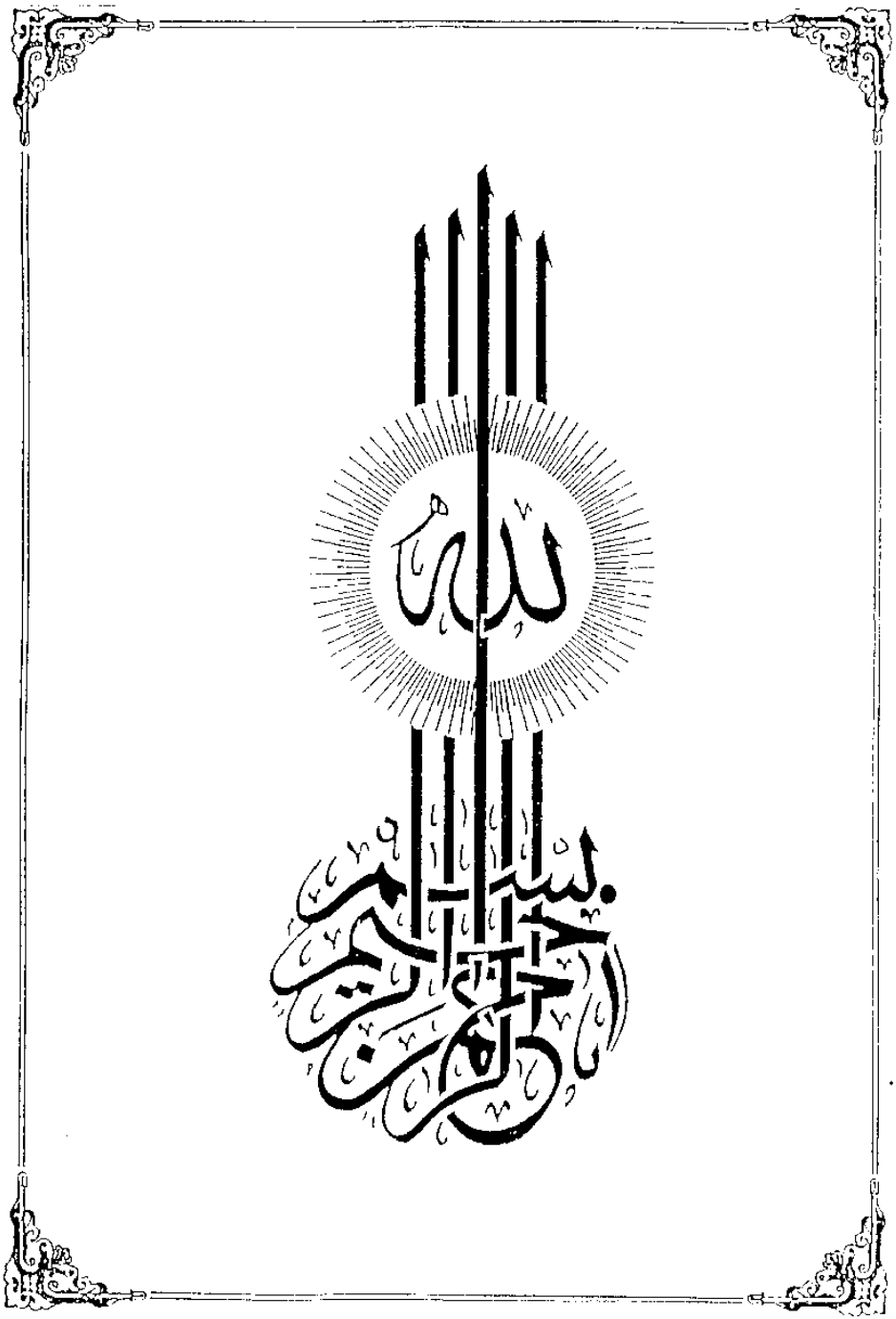

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Introduction and Aim of the work

INTRODUCTION

The weight of the infant is a measurement of the adequacy of the total development achieved by infant by the time he is born. It has long been accepted that maturity is judged almost entirely on the basis of birth weight, ignoring the weeks of gestation achieved at the time of birth. It is rare to find premature infants classified according to the time of gestation (Hendricks, 1964).

Many factors have been suggested to affect birth weight. Dougherty and Jones (1982), considered the sex of the baby, parity, maternal smoking during pregnancy, social status, maternal weight, height and hemoglobin concentration as important factors affecting birth weight.

As regard baby's sex the male newborns weigh on the average more than female newborns.

The multiparous mothers bear larger infants than do primigravidas.

The newborn infants of cigarette smoking mothers were reported to weight 150 to 400 grams less than newborn infants of non smokers (Yerushalmy, 1971).

Social calss differences affect birth weight, the

lower the social class of the mother the lighter are her babies.

Maternal size is the biggest single environmental factor affecting the birth weight at any gestational age (Hytten and Lind, 1973).

High maternal hemoglobin levels, had been associated with intrauterine growth retardation, conversely, low levels of hemoglobin in the mother had been associated with large newborns (Sagen et al., 1984).

Aim of The Work

This work aims to find the mean birth weight of apparently normal pregnant females in Ain Shams Maternity Hospital and variables influencing it.

Review of Literature

Fetal Growth

Defective fetal growth and nutrition provides the area in which the obstetrician, by early accurate diagnosis, and prompt intervention, has the greatest hope of producing not only a further reduction in perinatal mortality, but also a reduction in the mental and physical handicaps which are attributable to perinatal causes (Willocks, 1978).

The newborn full term baby is 6 billion times heavier than the egg from which it came (Arey, 1965).

Though, such rate of growth have evoked curiosity since the earliest times, it is surprising that more facts have not been accumulated over the years, and that the compilation of standards of weight for gestational age, for example, is quite a recent affair (Willocks, 1978).

Information about fetal growth came in the past from postmortem studies, derived mainly from spontaneous aborted and ectopic embryos and fetuses, less suitable for the purpose of establishing normal standards of intrauterine growth. Classic examples are those of Streeter (1920) and Scammon and Calckin (1929).

After legalisation of abortion in Europe and American recent studies were based on apparently normal pregnancies; for example Iffy et al., (1975). Jakobovits et al., (1972-1976) studies direct measurements of fetuses obtained by hysterotomy.

After the 20th week of gestation most of the data is based on measurements obtained postnatally from live prematurely born infants. Premature birth itself is abnormal and presents an indeterminable bias in the data, one should therefore be aware that the dimensions, on intrauterine growth, are only approximations of group fetal growth patterns determined from the onset of the mother's last menstrual period (Gasser, 1981).

As Gruenwald (1967) points out, the most fundamental limitation on the study of the human fetal growth, has been that, it has been impossible to follow a single embryo by repeated measurements during intrauterine life.

Now we can measure the living fetus, as it grows, estimate products of its metabolism, and even carry out forms of treatment in utero.

To apply information about fetal growth, certain

standards are necessary. The first is knowledge of the maturity or age of the fetus. The results of all commonly used tests of fetal growth and welfare are related to maturity, and if the age of the fetus is uncertain, it is often difficult to decide whether low values obtained from certain tests represent a failure of growth and consequent danger to life, or are merely a reflection of immaturity. The second standard is knowledge of normal fetal growth as basis for detecting the abnormal fetal growth. Healthy mature babies vary considerably in size and the clinician must know what are the limits of normal growth in his patients. Fetal growth can be defined simply as an increase in mass during development (Willocks, 1978).

1. First Half of Gestation

Fetuses during the first half of pregnancy have a menstrual age of 20 weeks or less, weight 300 gm or more. All such fetuses today are considered to be previable, or nonviable since non that have been born after such brief a period in utero have been able to survive outside the uterine environment (Pritchard et al., 1985).