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MULTIPLE PREGNANCY

Essay

Submitted for the partial fulfillment of the Master Degree in Obstetrics and Gynecology

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Buogs

بسم الله الرحمن الرحيم

لِلهِ مُلكُ السَّمَاوَاتِ وَالْأَرْضِ يَخْلُقُ مَا يَشَاءُ يَهَبُ لِمَن يَشَاءُ يَشَاءُ إِنَاثًا وَيَهَبُ لِمَن يَشَاءُ الدُّكُورَ * أو يُزَوِّجُهُم الدُّكُورَ * أو يُزَوِّجُهُم دُكرَانًا وإِنَاثًا وَيَجِعَلُ مَن يَشَاءُ عَقِيمًا إِنْهُ عَلِيمٍ قَدِير.

صدق الله العظيم سورة الشورس ، الآيتين ۲۹

To.....

My family

With love.

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ABBREVIATIONS

% Percent

AA Artery to artery

AV Artery to vein

BPD Biparietal diameter

DiDi Diamniotic dichorionic

DiMo Diamniotic monochorionic

dl Deciliter

DZ Dizygotic

ET Embryo transfer

FSH Follicle stimulating hormone

g Gram

G₆PD Glucose-6-phosphate dehydrogenase

GIFT Gamete intrafallopian transfer

hCG Human chorionic gonadotropin

hMG Human menopausal gonadotropin

hPL Human placental lactogen

IGg Immunoglobulin g

IM Intramuscular

IPC Intrauterine pressure catheter

IUGR Intrauterine growth retardation

IVF In-vitro fertilization

IVH Intraventricular hemorrhage

KCl Potassium chloride

Kg Kilogram

L/S Lecithin/sphingomyelin

Lbs Pounds

LH Luteinizing hormone

mEq Milliequivalent

MFGs Multifetal gestations

mg Milligram

mg/dl Milligram per deciliter

ml Milliliter

mm Millimeter

mm³ Cubic millimeter

MOM Multiples of the median.

MoMo Monoamniotic monochorionic

MSAFP Maternal serum alpha fetoprotein

MZ Monozygotic

PaO₂ Arterial oxygen partial pressure

pH Inverted log of hydrogen concentration

TTS Twin transfusion syndrome

UAM Uterine activity monitoring

VV Vein to vein

Introduction and Aim of Work

INTRODUCTION

Multiple pregnancy is one of the most interesting events in obstetrics. It refers to gestations in which there are two or more fetuses (Alvarez and Berkowitz, 1990).

Multiple gestations constitute less than 1% of all births (Kovacs et al., 1989). Dizygotic twins occur when two separate ova are fertilized by two separate spermatozoa. The incidence of dizygotic twins is influenced remarkably by race, heredity, maternal age, parity and especially fertility drugs (MacGillivray, 1986).

On the other hand, monozygotic twins result from fertilization of a single ovum that subsequently divides. Depending upon the time interval between fertilization and cleavage of the embryo, different placental membrane relationships may result. Monozygotic twinning seems to occur at a fairly constant ratio throughout the world at between 3–5 per 1000 births (*Benirschke*, 1990).

Since the early 1970s, however, the incidence of multiple gestation has increased dramatically as a result of the growing use of ovulation induction agents as clomiphene citrate and human menopausal

gonadotropins. The use of in-vitro fertilization (IVF) and embryo transfer (ET) has further increased the incidence of multiple pregnancies (*Hickok and Hollenbach*, 1990).

Several studies have suggested that twin gestations impose greater demands on maternal physiologic systems than do singleton pregnancies. It is generally believed that an increase in the occurrence of many of the maternal complications of pregnancy is a consequence of this increased burden on the maternal adaptive capacity (*Yeast*, 1990).

Multiple gestations of any order are associated with increased maternal and neonatal morbidity. Among the common maternal complications are spontaneous abortion, preeclampsia and preterm delivery. Also common fetal complications are intrauterine fetal death, intrauterine growth retardation, twin-to-twin transfusion syndrome and most importantly prematurity with its sequelae (*Gibb and Greenough*, 1991).

Optimal obstetric management of multiple pregnancies begins with early diagnosis. One clear value of early diagnosis is that it allows the patient to be informed and educated in advance about the multitude of potential problems with twins. In addition, the warning signs and