

بسم الله الرحمن الرحيم



-C-02-50-2-





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرونيلم





جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة يعيدا عن الغيار













بالرسالة صفحات لم ترد بالأصل



811727

The effect of maternal iron deficiency anemia on the ratio of fetal weight to placental weight as evaluated by antenatal ultrasonography.

Thesis
Submitted for partial fullfilment
Of
Master degree in Obstetrics & Gynecology
By

Aly Abd El-Aleem Mohammed Gewily Under supervision of

Prof. Dr. Fatma Hassan Abd El-khalek
Prof. & Head of department of Obstetrics & Gynecology
Faculty of Medicine
Menoufiya University

Prof. Dr. Samia Hassan Kandil Ass. Prof. of Clinical Pathology Faculty of Medicine Menoufiya University

Dr. Nasser Kamal Abd El-Aal
Leacturer of Obstetrics & Gynecology
Faculty of Medicine
Menoufiya University

Menoufiya University 1994 بسر الله الرحمن الرحيم هو الذي يصوركم في الخارحام كيف يشاء الم إله إلا هو الغزين الحكيم

صدق الله العظيم آل عوران الآية (٦) Acknowledgement

Acknowledgement

I would like to express my deepest gratitude and respect to Prof. Dr. Fatma Hassan Abd El-khalek, professor & head of department of Obstetrics & Gynecology, Faculty of medicine, Menoufiya university for her kind guidance and continious encouragement throughout the whole work.

I would like to express my sincere and profound thanks to Prof. Dr. Samia Hassan Kandil, assistant professor of Clinical Pathology, Faculty of medicine, Menoufiya university for her continious advice and help to compelete this work in a proper manner.

Special thanks and appreciation for Dr. Nasser Kamal Abd El-Aal lecturer of Obstetrics & Gynecology, Faculty of medicine, Menoufiya university for his generous help, supportive advice and revision of this work

Iam grateful to Dr. Mohamed Ramadan El-Kholy, lecturer of Radiology, Faculty of medicine, Menoufiya university for his kind help and continious advice throughout the work.

0

Finally, I would like to express my thanks to all those who shared in bringing out this work to light.

Contents

| Subject | Page |
|---------------------------------------|---------|
| Introduction | 3 |
| Aim of the work | 5 |
| Review of literature: | |
| - Hematological changes associated | |
| with normal pregnancy | 6 |
| - Homeostasis of iron | 14 |
| - Iron deficiency anemia during | |
| pregnancy | |
| * Epidemiology, etiology and clinical | 20 |
| features | |
| * Hematological features of iron | |
| deficiency anemia | 26 |
| * Effects of iron deficiency anemia | |
| in pregnancy | 33 |
| * Management of iron deficiency | |
| anemia | 38 |
| - Ultrasonic guided placentometry | |
| and fetal weight estimation | 46 |
| Subjects & methods | 56 |
| Results | 66 |
| Discussion | 90 |
| Summary | 100 |
| References | 104 |
| Arabic Summary | A NASSA |

Introduction

Introduction

Anemia can be defined as a state of chronic oxygen lack i.e. decreased capacity of the blood due to defect in the number or function of circulating red cells. The number of red cells could be expressed as hematocrit of packed cell volume (P.C.V.) or as total hemoglobin content in a sample of peripheral venous blood. It is important to know that anemia is not a disease but it is a manifestation of some underlying disorders (Anderoli et al., 1990).

The total body iron content of a healthy young woman of avarage size is probably in the range of 2.0 to 2.5 grams, which enters in the formation of haem iron enzymes, myoglobin and in transferrin bound circulating iron (Pritchard and Mason 1964).

The iron requirements during normal pregnancy is about 1000 mg. about 300 mg. are actively transferred to the fetus and placenta, about 200 mg. are lost through various normal routes of excretion and the increase in the total volume of circulating erythrocytes needs about 500 mg iron. So, there is a high incidence of iron deficiency anemia in pregnancy because many women of child-

bearing age are in pre-carious iron balance and because the fetal iron requirements are satisfied before maternal iron needs (Pritchard and McDonald 1985).

A Fall in the mean cell volume (MCV) is Probably the most sensitive indicator of iron deficiency anemia determinable from serial routine full blood count measurements (Taylor 1981).

Severe maternal anemia is known to be associated with large placental weight and high feto placental ratio (Beischer et al.,1970).

Large placental weight and high feto placental ratio, both known predictors of higher adult blood pressure in babies born to iron deficient anemic mothers (law et al., 1991).

Ultrasonography being a safe, simple non invasive procedure for visualization of the fetus, has been used antenatally to estimate the fetal weight as well as placental weight (Sabbagha et al., 1978).

Aim of the work

Aim Of The Work

The aim of this study is to evaluate the effect of maternal iron deficiency anemia on the ratio of fetal weight to placental weight and the effect of hematinic therapy during different gestational ages on this ratio.