

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



# شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
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# بعض الوثائق الأصلية تالفة

بالرسالة صفحات  
لم ترد بالأصل

**FETAL SACRAL LENGTH IN  
ULTRASONOGRAPHIC  
ASSESSMENT  
OF GESTATIONAL AGE.**

*Thesis Submitted to the Faculty of Medicine,  
Alexandria University, as a part of the degree of  
Master in*

**GYNECOLOGY AND OBSTETRICS**

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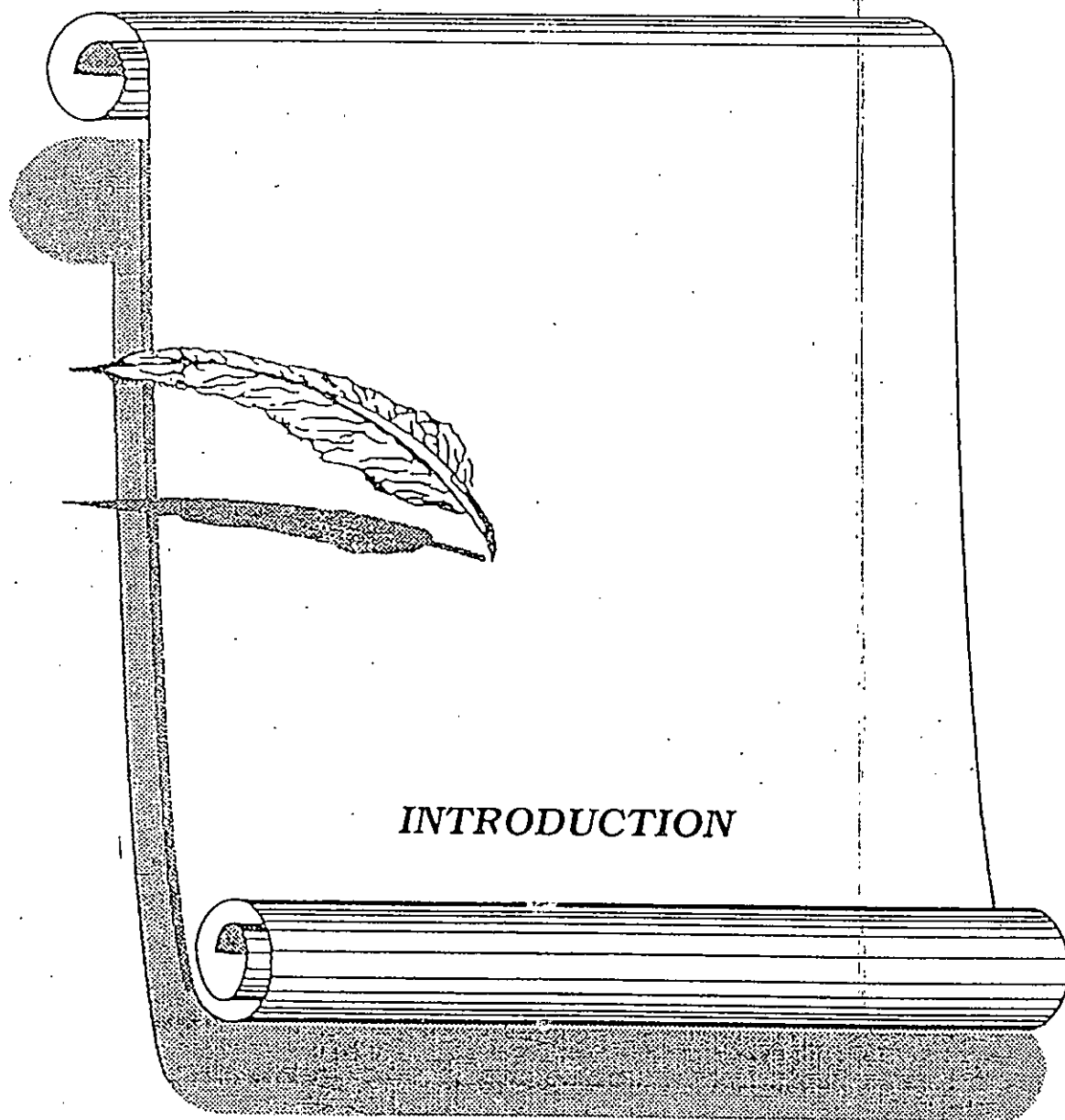
"وسع ربنا كل شيء علما"

صدق الله العظيم

الأعراف (٨٩)

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## INTRODUCTION

## Introduction

The actual fetal age starts from conception, so the proper equivalent terms are conceptional age or gestational age.

However, obstetricians used to date pregnancies in menstrual weeks, beginning from the first day of last menstrual period and this is known as menstrual age.<sup>(1)</sup>

Determination of the age of the fetus is undoubtedly important for ideal obstetrical management for many reasons such as :-

1. It allows obstetrician to choose the proper time for elective intervention such as, timing of repeated cesarean section and delivery of diabetic mothers<sup>(2)</sup>. Also, the time of some interventions is determined by proper dating as diagnostic amniocentesis and intrauterine transfusion for Rh problem.<sup>(2,3)</sup>
2. It allows the physician to institute measures that will optimize the fetal outcome in case in which labour ensues before 36 weeks or fails to occur after 42 weeks.<sup>(1)</sup>
3. Assessment of fetal growth in cases of placental insufficiency as pre-eclampsia, renal disease or heart disease.

Unfortunately, for a variety of reasons menstrual age may be unknown or wrong. It may be unknown as a consequence of the woman not obtaining prenatal care until long after events important for the identification of fetal age have passed or been forgotten. An error may result from unrecognized ovulation delay e.g; following menses induced by withdrawal of oral contraceptive without an accurate gestational age.<sup>(1)</sup> The appropriateness of fetal growth cannot be established and serious errors in patient management may result.<sup>(4)</sup>

***\*Estimation of the gestational age by ultrasound***

Several ultrasound parameters have been used to estimate gestational age.

The most commonly used are <sup>(5)</sup> :-

- # Gestational sac volume.
- # Crown-rump length.
- # Biparietal diameter.
- # Femur length.
- # Head circumference.
- # Abdominal circumference.

These parameters can be used as in the following table <sup>(5)</sup>

Gestational age (weeks)	Parameter
4-7	Gestational sac volume
6-12	Crown-rump length
12-15	Defer measurement
15-24	Biparietal diameter, femur length And circumference measurements
24 weeks on words	Gestational age can't be so accurately determined by ultrasound (but still different parameters can be used)

**\* Gestational sac volume**

The gestational sac is the chorionic cavity of the developing pregnancy and is visualized as a circle, transonic area surrounded by a thick bright ring. The sac usually lies at the uterine fundus and is eccentrically placed. The ring and the eccentric position of the gestational sac are best appreciated in the cross-section of the uterus. They are important markers for confirming an intrauterine pregnancy.

The gestational sac may be visualized at the time of the missed period using the transvaginal method