

الآية:

(اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (1) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ)

(2) اقْرَأْ وَرَبُّكَ الْأَكْرَمُ (3) الَّذِي عَلَّمَ بِالْقَلَمِ (4)

عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ (صدق الله العظيم

Dedication

TO my loved parents , for their continuous encouragement and support , my husband ,my sister and my brothers , and finally ... I

..dedicate to all those who help me

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. I would thank Allah for being me good and healthy

I would like to thank my supervisor Dr. Mona Mohamed
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Abstract

On ultrasound examination found common parameters for assessing gestational age and known normal growth of fetus, these parameters e. g femur length (FL), biparital diameter (BPD), head circumference (HC), abdominal circumference (AC). Measuring occipito frontal diameter (OFD) along with these parameters could be of great values for estimation of gestational age

The main objective of this study was to estimate the gestational age by using occipitofrontal diameter and it compare with other common parameters (FL&BPD) which compare the age in weeks and it measured the length in centimeter

Fifty pregnant Sudanese women were included in this study all women their age between 17-42 years in the second and third trimester came to ultrasound department, checking for antenatal routine ultra sound examination at Haj Alsafi educational hospital, who had normal and singleton pregnancy

After measuring the FL and BPD, measured the OFD from outer to outer, then calculated the GA by OFD and correlating with GA by FL and BPD. The study found correlation between GA from OFD and GA from FL as $r = 0.958$, correlation between GA from OFD and which that from BPD as $r = 0.967$, and also correlation between GA from OFD and expected gestational age in which $r = 0.952$ that means the study found the strong relation between them .The study also showed linear regression between OFD was measured in centimeters and expected gestational

age in weeks. Thus OFD is significant in estimating gestational age, from 13 weeks till “25-30” weeks of gestational age.

الخلاصة

في فحوصات الموجات فوق الصوتية نجد ان هنالك عوامل مستخدمة بصورة واسعة لتحديد عمر الجنين خلال فترة الحمل، هذه العوامل مثل قياس طول الفخذ، قطر الرأس من منطقة العظم الجداري ، محيط الرأس ، ومحيط البطن ، فاذا قيس طول الرأس من العظم الجبهي الى العظم القذالي فيمكن أن يكون ذا أهمية في تحديد عمر الجنين .الهدف الأساسي لهذه الدراسة هو تحديد عمر الجنين باستخدام قياس طول الرأس من العظم الجبهي الى العظم القذالي ومقارنته بالعوامل الأخرى الأكثر استخداما من حيث العمر بالأسابيع وكذلك الطول بالسنتيمترات. شملت هذه الدراسة 50 سيدة سودانية حامل بحمل طبيعي في الثلث الثاني والثالث من الحمل تتراوح أعمارهن بين 17-42 سنة جميعهن قادمات لفحوصات الموجات فوق الصوتية الروتينية بمستشفى حاج الصافي التعليمي. بعد قياس طول عظم الفخذ وقطر الرأس من منطقة العظم الجداري وحساب الأعمار الجنينية المكافئة لها تم قياس طول الرأس أيضا من الحافة الخارجية للعظم الجبهي الى الحافة الخارجية للعظم الغزالي وتم حساب العمر وتمت مقارنته مع أعمار الأجنة المأخوذة بواسطة طول الفخذ ووجد أن هنالك علاقة ارتباط بينهما وهي $r=0.958$. وعلاقة

الارتباط بينه وبين أعمار الاجنة المأخوذة بواسطة قطر الرأس هي $r=0.967$. كما توجد علاقة ارتباط بينه وبين أعمار الاجنة المحسوبة بواسطة تاريخ آخر دورة شهرية تتمثل في $r=0.952$. هذا يعني وجود علاقة ارتباط قوية بينهم (طول الفخذ وطول العظم الجداري وطول الرأس من العظم الجبهي الي العظم القذالي) وأظهرت الدراسة ايضا علاقة ارتباط خطية بين- قياس طول الرأس من العظم الجبهي الى العظم القذالي بالسنتيمترات وعمر الاجنة المحسوب من تاريخ آخر دورة شهرية بالأسابيع لذا طول الرأس من العظم الجبهي الي العظم القذالي مهم في تحديد عمر الجنين من الاسبوع 13 حتى (25-30) اسبوع.

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List of Abbreviations

: ultrasound	U/S
: Mean Sac Diameter	MSD
: Gestational Age	GA
: Gestational Sac	GS
: Crown Rump Length	CRL
: Last Menstrual Period	LMP
: Bi parietal Diameter	BPD
: Head Circumference	HC
: Abdomen Circumference	AC
: Occipito Frontal Diameter	OFD
.: Femur length	FL
. : Trans Cerebellar Diameter	TCD
. : Expected Date of delivery	EDD
.: Corpus Callusum	CC
. : A genicess of corpus callusum	ACC
.: Cavium Septi Pellucidi	CSP
. : Estimated Date of Conception	EDC

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**Estimation of Gestational Age by Occipito Frontal
Diameter using UltraSound**

تقدير فترة الحمل من خلال قياس القطر القذالي الجبهي باستخدام

الموجات فوق الصوتية

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