

Doppler Ultrasound Study of Fetal Middle Cerebral Artery and Renal Artery in Cases with Idiopathic Hydramnios

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا
عَلَّمْتَنَا

إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

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List of Abbreviations

ACOG:	American College of Obstetricians and Gynecologists
AF :	Amniotic fluid
AFI :	Amniotic fluid index
AFS :	Amniotic fluid-derived stem cells
AFV :	Amniotic fluid volume
BMI :	Body mass index
BPP :	Biophysical profile
C/U ratio:	Cerebral /Umbilical ratio
CST :	Contraction stress test
CWD:	Continuous wave Doppler
DFV :	Doppler flow velocimetry
EDV :	End-diastolic velocity
EGF :	Epidermal growth factor
Fd :	Doppler frequency
FHR :	Fetal heart rate
GA :	Gestational age
G-CSF:	Granulocyte colony-stimulating factor
IGF-I:	Insulin-like growth factor I
IUGR:	Intrauterine growth restriction
LVP:	Largest vertical pocket

MCA:	Middle cerebral artery
NST:	Non stress test
PI :	pulsatility index
PMR:	Perinatal mortality rate
PRF:	pulse repetition frequency
PSV:	Peak systolic velocity
PW :	Pulsed wave Doppler.
RA :	Renal artery
RI :	Resistance index
ROC:	Receiver operator characteristic
S/D ratio:	Systolic to diastolic ratio
TGF-b1:	Transforming growth factor beta-1
TTS:	Twin to twin transfusion syndrome
UA :	Umbilical artery

An abstract graphic consisting of a grid of vertical and horizontal lines. There are six vertical lines and five horizontal lines. At each end of every line, there is a small dot. The dots are arranged in a 6x5 grid pattern. The word "Introduction" is centered to the right of the vertical lines.

Introduction

Introduction

Polyhydramnios is defined as an excess of amniotic fluid and is diagnosed when amniotic fluid index (AFI) ≥ 24 cm on real-time obstetric ultrasound, the single deepest pocket (SDP) as being ≥ 8 cm, or the examiner's subjective assessment of having an increased amount of amniotic fluid volume (*Magann et al., 2007*).

Adverse perinatal outcomes in patients with polyhydramnios have been associated with congenital fetal anomalies in numerous studies. Perinatal morbidity and mortality rates also significantly increase. (*Pauer et al., 2003*)

The etiologic factors of polyhydramnios are varied and may include maternal and fetal conditions such as congenital anomalies, diabetes mellitus, isoimmunization, multiple gestations, and placental abnormalities (Many *et al., 1996*). But the cause of polyhydramnios remains idiopathic in most cases (60%) (*Ben-Chetrit et al., 1990*).

Idiopathic hydramnios is defined as hydramnios that is not associated with any apparent maternal or fetal cause (*Magann et al., 2007*). It is an independent risk factor for perinatal morbidity and mortality. Although the precise mechanism is unknown, hydramnios may alter oxygen delivery to the fetus (*Mazor et al., 1996*).