

N-TERMINAL PRO-BRAIN NATRIURETIC PEPTID LEVEL IN FULL TERM NEWBORN WITH PERINATAL HYPOXIA

Thesis

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**مستوى البتيد المدر للصوديم لى حىثى الولاءة مكتملى
العمر الرهمى اللىن تعرضوا لنقص الاكسجين ما حول
الولاءة**

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فى طب الاطفال

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SUMMARY

HIE remains a major cause of perinatal and neonatal mortality, as well as of permanent neurodevelopmental disability.

Early detection is crucial for interventions aimed at preventing or reversing ongoing injury.

Neonatal encephalopathy is a heterogeneous syndrome characterized by symptoms of CNS dysfunction in infants born at/ or near term (> 36 wk gestation). An infant with neonatal encephalopathy may exhibit abnormal loss of consciousness, seizures, tone and reflex abnormalities, apnea and feeding difficulties.

HIE is defined as brain hypoxia and ischemia due to systemic hypoxemia and reduced cerebral perfusion characterized by clinical and laboratory evidence of acute or subacute brain injury, most often the underlying cause remains unknown.

Brain-type natriuretic peptide (BNP) is a natriuretic, diuretic, and vasodilator compound first discovered in the hypothalamus but mainly synthesized in the myocardium.

Atrial natriuretic peptide (ANP) is synthesized primarily in the cardiac atria, while BNP in both the cardiac atria and the ventricles.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَأَنْزَلَ اللَّهُ عَلَيْكَ
الْكِتَابَ وَالْحِكْمَةَ
وَعَلَّمَكَ مَا لَمْ
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فَضْلُ اللَّهِ عَلَيْكَ
عَظِيمًا

صدق الله العظيم
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List of Abbreviations

<i>Abb.</i>	<i>Full term</i>
AAN	The American Academy of Neurology
AAP	American Academy of Pediatrics
ABP,	Arterial blood pressure
ACOG	American College of Obstetricians and Gynecologists
ANB	Atrial natriuretic peptide
Arf	Acute renal failure
Ast	Aspartate Amino transeferase
ATN	Acute tubular necrosis
ATP	Adenosine tri phosphate
AVP	Arginine vasopressin
BNP	Brain-type natriuretic peptide
BP	Blood pressure
C.P	Cerebral palsy
C.S	Caesarian section
Ca	Calcium
CBC	Complete blood count
CBF	Cerebral blood flow
cGMP	Cyclic guanine monophosphate
CNP	c-type Natriuretic peptide
CNS	Central nervous system
CO	Carbon monoxide
COP	Cardiac output
CPAP	Continuous positive airway pressure
CPP	Cerebral perfusion pressure
CRP	C reactive protein
CS	Cesarean section
CT	Computed tomography
CTG	Continuous cardiotocography
CVP	Central venous pressure
CVS	Cardiovascular system
Cyclic GMP	Cyclic guanine monophosphate
DM	Diabetes mellitus

<i>DNA</i>	Deoxyribonucleic acid
<i>DWI</i>	Diffusion-weighted imaging
<i>E/Ea</i>	Ratio of early to late atrial transmitral flow velocity
<i>EEG</i>	Electroencephalogram
<i>EEG</i>	Electroencephalogram
<i>EF</i>	Ejection fraction
<i>EIA</i>	Enzyme immunoassay
<i>ELISA</i>	Enzyme-Linked Immunosorbent Assay
<i>ETT</i>	Endotracheal tube
<i>FHR</i>	Fetal heart rate
<i>GA</i>	Gestational age
<i>GA</i>	Gestational age
<i>GABA</i>	Gamma-aminobutyric acid
<i>GFR</i>	Glomerular filtration rate
<i>GIT</i>	Gastrointestinal tract
<i>GM1</i>	Monosialoganglioside
<i>GTP</i>	Guanine triphosphate
<i>H.F</i>	Heart failure
<i>H₂O₂</i>	Hydrogen peroxide
<i>Hb</i>	Hemoglobin
<i>HbCo</i>	Carboxy-hemoglobin
<i>HCM</i>	Hypertrophic cardiomyopathy
<i>HCT</i>	Hematocrit
<i>He</i>	Haemorrhage
<i>HIE</i>	Hypoxic-Ischemic Encephalopathy
<i>HPF</i>	High power field
<i>HsCRP</i>	High-sensitivity C-reactive protein
<i>HTN</i>	Hypertension with pregnancy
<i>I.C.H</i>	Intracranial hemorrhage
<i>I.V</i>	Intra venous
<i>ICP</i>	Intracranial pressure
<i>IDM</i>	Infants of diabetic mothers
<i>IgG</i>	Immunoglobulin G
<i>IMRA</i>	Immunoradiometric method
<i>IMV</i>	Intermittent mechanical ventilation
<i>IUGR</i>	Intrauterine growth retardation
<i>K⁺</i>	Potassium
<i>KLD</i>	Kinase-like domain

LAD	Left atrial dimension
LDH	Lactate dehydrogenase
LV	Left ventricle
LVEDP	Left ventricle end diastolic pressure
LVEF	Left ventricle ejection fraction
LVSD	Left ventricular systolic dysfunction
MOH	Ministry of health
MRI	Magnetic resonance imaging
MRS	Magnetic resonance spectroscopy
Na⁺	Sodium
NAD	Nicotinamide adenine dinucleotide
NB	Newborn
NE	Neonatal encephalopathy
NEC	Necrotizing enterocolitis
NEP	Neutral endopeptidase
NICU	Neonatal intensive care unite
NIRS	Near infrared spectroscopy
NMDA	N-methyl-D-aspartate receptors.
NO	Nitric oxide
NP	Natriuretic peptide
NPR-A	Natriuretic peptide receptor – A
NPR-B	Natriuretic peptide receptor-B
NPR-C	Natriuretic peptide receptor-C
NSE	Neuron specific enolase
NT-pro BNP	N-terminal pro – B – type Natriuretic Peptide
NVD	Normal vaginal delivery
NYHA	New York Heart Association
O₂	Oxygen
O_{fc}	Occipitofrontal circumference
PCO₂	Partial Pressure of carbon dioxide
PDA	Patent ductus arterioses
PET	Positron emission tomography
PLEDs	Focal periodic lateralized epileptiform discharges
PO₂	Partial Pressure of oxygen
PROM	Premature rupture of membranes
PUFA	Polyunsaturated fatty acid
RAST	Radioallergosorbent test
RBS	Random blood sugar