



# **Comparison of the Effect of Norepinephrine and Dopamine on Cerebral Haemodynamics in Severely Brain Injured Patients Using Transcranial Doppler**

*Thesis*

*Submitted for Partial Fulfillment of MD Degree  
In Intensive Care*

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**2017**

## Acknowledgement

First of all, I would like to express my deep gratitude to **ALLAH** for his care and generosity throughout my life...

No words can express my deepest appreciation and profound respect to **Prof. Dr. Amir Ibrahim Salah**, Professor of Anaesthesia and Intensive Care, Ain Shams University, for his continuous guidance and support. He has generously devoted much of his time and his effort for planning and supervision of this study.

Also, my profound gratitude to **Dr. Safaa Ishak Ghafy**, Assistant Professor of Anaesthesia and Intensive Care, Ain Shams University, for her kind supervision and support. It was great honor to work under her supervision.

I would like also to thank **Dr. Magdy Khalaf Massoud**, Consultant and Head of Neurological Department, Elmataria Teaching Hospital, for his support, help and constructive criticism during this work.

I would like also to thank **Dr. Mayar Hassan El Sersi**, Assistant Professor of Anaesthesia and Intensive Care, Ain Shams University Hospitals, for her support and help during this work.

Also, my profound gratitude to **Dr. Heba Abdelazeem Labib**, Assistant Professor of Anaesthesia and Intensive Care, Ain Shams University, for her great care and support.

Last but not least, I dedicate this work to my family, whom without their sincere emotional support, pushing me forward this work would not have ever been completed.

**Hend Abdelsabour**

# *Dedication*

 *To*

*My Soul Brother*

*Mohammed Abd El-Sabour*

## *List of Abbreviations*

Abb.	Meaning
ABG	: Arterial blood gas
ACA	: Anterior cerebral artery
AComA	: Anterior communicating arteries
AMP	: Adenosine monophosphate
AP	: Arterial pressure
ATP	: Adenosine triphosphate
AU	: Arbitrary unit
AVDO <sub>2</sub>	: Arteriovenous difference in oxygen
BBB	: Blood brain barrier
BP	: Blood pressure
Ca <sup>2+</sup>	: Calcium
cAMP	: Cyclic adenosine monophosphate
CBF	: Cerebral blood flow
CBV	: Cerebral blood volume
CI	: Cardiac index
CMRO <sub>2</sub>	: Cerebral metabolic rate of oxygen
CO	: Cardiac output
CO <sub>2</sub>	: Carbon dioxide
CO <sub>2</sub>	: Carbon dioxide
CPP	: Cerebral perfusion pressure
CSF	: Cerebrospinal fluid
CT	: Computed tomogram
CTA	: Computerized tomography angiography
CVP	: Central venous pressure
CVR	: Cerebrovascular resistance
DA	: Dopamine

## *List of Abbreviations (Cont.)*

Abb.	Meaning
<b>DO<sub>2</sub></b>	: Oxygen delivery
<b>DR</b>	: Dopaminergic receptor
<b>eCPP</b>	: Estimating cerebral perfusion pressure
<b>EDV</b>	: End-diastolic velocity
<b>FV</b>	: Flow velocity
<b>FVd</b>	: Diastole flow velocity
<b>FVmax</b>	: Maximum FV
<b>FVs</b>	: Systole flow velocity
<b>GCS</b>	: Glasgow coma scale
<b>HR</b>	: Heart rate
<b>ICA</b>	: Internal carotid artery
<b>ICH</b>	: Intracranial hemorrhage
<b>ICP</b>	: Intracranial pressure
<b>ICU</b>	: Intensive care unit
<b>IL</b>	: Interleukin
<b>IV</b>	: Intravenous
<b>K</b>	: Potassium
<b>LDF</b>	: Laser Doppler flowmetry
<b>LOS</b>	: Length of stay
<b>LVSWI</b>	: Left ventricle stroke work index
<b>MAP</b>	: Mean arterial pressure
<b>MB</b>	: Methylene blue
<b>MCA</b>	: Middle cerebral artery
<b>MHz</b>	: Mega Hertz
<b>MRI</b>	: Magnetic resonance Imaging
<b>MV</b>	: Mean velocity
<b>Na</b>	: Sodium
<b>NE</b>	: Norepinephrine

## *List of Abbreviations (Cont.)*

Abb.	Meaning
<b>OA</b>	: Ophthalmic artery
<b>OEF</b>	: Oxygen extraction fraction
<b>PaCO<sub>2</sub></b>	: Arterial carbon dioxide tension
<b>PaO<sub>2</sub></b>	: Arterial oxygen tension
<b>PbtO<sub>2</sub></b>	: Brain oxygen tension
<b>PCA</b>	: Posterior cerebral artery
<b>PCoMA</b>	: Posterior communicating arteries
<b>PCWP</b>	: Pulmonary capillary wedge pressure
<b>pHi</b>	: The gastric intramucosal PH
<b>PI</b>	: Pulsatility index
<b>PVR</b>	: pulmonary vascular resistance
<b>RVSWI</b>	: Right ventricle stroke work index
<b>SAH</b>	: Subarachnoid hemorrhage
<b>SaO<sub>2</sub></b>	: Arterial oxygen saturation
<b>SjO<sub>2</sub></b>	: Jugular bulb oxygen saturation
<b>SV</b>	: Peak systolic velocity
<b>SVI</b>	: Stroke volume index
<b>SVR</b>	: Systemic vascular resistance
<b>TBI</b>	: Traumatic brain injury
<b>TCD</b>	: Transcranial doppler
<b>TD</b>	: Thermal diffusion
<b>UCP 2</b>	: Mitochondrial uncoupling protein
<b>UO</b>	: Urine output
<b>V1</b>	: Vasopressin type 1
<b>VA</b>	: Vertebral arteries
<b>VO<sub>2</sub></b>	: Oxygen uptake
<b>vWF</b>	: von willebrand factor
<b>ZFP</b>	: Zero-flow pressure

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# *Introduction*

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## *Aim of the Study*

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# *Review of Literature*

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