



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



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# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

### قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



### يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**MONA MAGHRABY**



# **HEMODYNAMIC MONITORING IN CRITICALLY ILL PATIENTS IN PAEDIATRIC ICU**

*Thesis*

*Submitted for Partial Fulfilment of  
MD Degree in Pediatrics*

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**2021**



# Acknowledgments

*First and foremost, I feel always indebted to **Allah** the Most Beneficent and Merciful.*

*Really I can hardly find the words to express my gratitude to **Prof. Dr. Tarek Ahmed Abdelgawad**, Professor of Paediatrics, Faculty of Medicine - Ain Shams University, for his supervision, continuous help, encouragement throughout this work and tremendous effort he has done in the meticulous revision of the whole work. It is a great honor to work under his guidance and supervision.*

*I would like also to express my sincere appreciation and gratitude to **Dr. Sondos Mohamed Magdy**, Lecturer of Paediatrics, Faculty of Medicine - Ain Shams University, for her continuous directions and support throughout the whole work.*

*I cannot forget the great help of **Dr. Marwa Waheed Abd Elhady Massef**, Lecturer of Paediatrics, Faculty of Medicine - Ain Shams University for her invaluable efforts, tireless guidance and for her patience and support to get this work into light.*

*Words fail to express my love, respect and appreciation to **my wife Suzy Abdo** for her unlimited help 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.*

**Beshoy Attaallah Ebrahim Sheehata**

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# List of Abbreviations

| Abb.                   | Full term                                     |
|------------------------|-----------------------------------------------|
| AC .....               | <i>Alternating electrical Current</i>         |
| ACTH .....             | <i>Adrenocorticotropic Hormone</i>            |
| AKI .....              | <i>Acute kidney injury</i>                    |
| ALT .....              | <i>Alanine aminotransferase</i>               |
| ARDS .....             | <i>Acute respiratory distress syndrome</i>    |
| AST .....              | <i>Aspartate aminotransferase</i>             |
| BP .....               | <i>Blood pressure</i>                         |
| BSA .....              | <i>Body Surface Area</i>                      |
| BUN .....              | <i>Blood Urea Nitrogen</i>                    |
| CABG.....              | <i>Coronary Artery Bypass Surgery</i>         |
| cAMP .....             | <i>Cyclic Adenosine Monophosphate</i>         |
| CaO <sub>2</sub> ..... | <i>Arterial O<sub>2</sub> content</i>         |
| CBC .....              | <i>Complete blood count</i>                   |
| CI .....               | <i>Cardiac Index</i>                          |
| CNS .....              | <i>Central Nervous System</i>                 |
| CO .....               | <i>Cardiac output</i>                         |
| CPB.....               | <i>CardioPulmonary Bypass</i>                 |
| CRP .....              | <i>C reactive protein</i>                     |
| CVP .....              | <i>Central Venous Pressure</i>                |
| DAMP .....             | <i>Damage-associated Molecular Pattern</i>    |
| DIC .....              | <i>Disseminated Intravascular Coagulation</i> |
| dIVC% .....            | <i>Inferio Vena Cava Collapsibility Index</i> |
| DO <sub>2</sub> .....  | <i>Oxygen delivery</i>                        |
| ECMO .....             | <i>Extracorporeal membrane oxygenation</i>    |
| ED.....                | <i>Emergency Department</i>                   |
| EDTA .....             | <i>Ethylenediaminetetraacetic acid</i>        |
| EDV .....              | <i>End Diastolic Velocity</i>                 |
| EF .....               | <i>Ejection Fraction</i>                      |
| ELISA .....            | <i>Enzyme Linked Immunosorbent Assay</i>      |
| ET .....               | <i>Ejection Time</i>                          |
| Fio <sub>2</sub> ..... | <i>Fractional oxygen content</i>              |
| FS .....               | <i>Fractional shortening</i>                  |
| FVa .....              | <i>Active Factor V</i>                        |

# List of Abbreviations cont...

| Abb.                          | Full term                                       |
|-------------------------------|-------------------------------------------------|
| <i>FVII</i>                   | <i>Factor VII</i>                               |
| <i>FVIIIa</i>                 | <i>Active Factor VIII</i>                       |
| <i>FXa</i>                    | <i>Active Factor X</i>                          |
| <i>GIT</i>                    | <i>Gastrointestinal tract</i>                   |
| <i>GRV</i>                    | <i>Gastric residual volumes</i>                 |
| <i>GS</i>                     | <i>Gastroschosis</i>                            |
| <i>HFOV</i>                   | <i>High-Frequency Oscillatory Ventilation</i>   |
| <i>Hgb</i>                    | <i>hemoglobin</i>                               |
| <i>HMGB1</i>                  | <i>High-Mobility Group Box 1 Protein</i>        |
| <i>HR</i>                     | <i>Heart Rate</i>                               |
| <i>IAP</i>                    | <i>Intraabdominal Presuure</i>                  |
| <i>I-FABP</i>                 | <i>Intestinal fatty acid binding protein</i>    |
| <i>IF-<math>\gamma</math></i> | <i>Interferon gamma</i>                         |
| <i>IL-1</i>                   | <i>Interleukin 1</i>                            |
| <i>IL-12</i>                  | <i>Interleukin 12</i>                           |
| <i>IL-4</i>                   | <i>Interleukin 4</i>                            |
| <i>IL-6</i>                   | <i>Interleukin 6</i>                            |
| <i>IM</i>                     | <i>Intramuscular</i>                            |
| <i>INR</i>                    | <i>International Normalized Ratio</i>           |
| <i>IO</i>                     | <i>Intraosseous</i>                             |
| <i>IV</i>                     | <i>Intravenous</i>                              |
| <i>IVC</i>                    | <i>Inferior Vena Cava</i>                       |
| <i>IVCCI</i>                  | <i>Inferior Vena Cava Collapsibility Index</i>  |
| <i>IVCI</i>                   | <i>Inferior Vena Cava Index</i>                 |
| <i>IVCT</i>                   | <i>Isovolumetric Contraction Time</i>           |
| <i>IVIG</i>                   | <i>Intravenous Immune Globulin</i>              |
| <i>IVRT</i>                   | <i>Isovolumetric Relaxation Time</i>            |
| <i>IVS</i>                    | <i>Interventricular Septum</i>                  |
| <i>K</i>                      | <i>Potassium</i>                                |
| <i>LVEDD</i>                  | <i>left ventricular end-diastolic dimension</i> |
| <i>LVEDV</i>                  | <i>Left Ventricular End-Diastolic Volume</i>    |
| <i>LVESD</i>                  | <i>Left ventricular end-systolic dimension</i>  |
| <i>LVESV</i>                  | <i>Left Ventricular End Systolic Volume</i>     |

# List of Abbreviations *cont...*

| Abb.                           | Full term                                                             |
|--------------------------------|-----------------------------------------------------------------------|
| <i>LVOT</i>                    | <i>Left Ventricular Outflow Tract</i>                                 |
| <i>MAMPs</i>                   | <i>Microbial-Associated Molecular Patterns</i>                        |
| <i>MAP</i>                     | <i>Mean arterial pressure</i>                                         |
| <i>MPI</i>                     | <i>Myocardial Performance Index</i>                                   |
| <i>MRAP</i>                    | <i>Mean Right Atrial Pressure</i>                                     |
| <i>NA</i>                      | <i>Sodium</i>                                                         |
| <i>NEC</i>                     | <i>Necrotizing Enterocolitis</i>                                      |
| <i>NF-<math>\kappa</math>B</i> | <i>Nuclear Factor Kappa B</i>                                         |
| <i>NIRS</i>                    | <i>Near infrared spectroscopy</i>                                     |
| <i>NO</i>                      | <i>Nitric oxide</i>                                                   |
| <i>P/F</i>                     | <i>Pao<sub>2</sub>/Fio<sub>2</sub> ratio</i>                          |
| <i>PAC</i>                     | <i>Pulmonary Artery Catheter</i>                                      |
| <i>PAI1</i>                    | <i>Plasminogen Activator Inhibitor 1</i>                              |
| <i>PALS</i>                    | <i>Pediatric Advanced Life Support</i>                                |
| <i>PaO<sub>2</sub></i>         | <i>Partial pressure of oxygen</i>                                     |
| <i>PARDS</i>                   | <i>Pediatric ARDS</i>                                                 |
| <i>PDEI</i>                    | <i>Phosphodiesterase inhibitors</i>                                   |
| <i>PEEP</i>                    | <i>Positive end expiratory pressure</i>                               |
| <i>PiCCO</i>                   | <i>Pulse Contour Cardiac Output</i>                                   |
| <i>PICU</i>                    | <i>Pediatric Intensive Care Unit</i>                                  |
| <i>PLRT</i>                    | <i>Passive leg-raising Test</i>                                       |
| <i>PPV</i>                     | <i>Pulse Pressure variation</i>                                       |
| <i>PRR</i>                     | <i>Pattern Recognition Receptors</i>                                  |
| <i>PSAX</i>                    | <i>Parasternal short axis</i>                                         |
| <i>pSOFA</i>                   | <i>Pediatric Sequential [Sepsis-related] Organ Failure Assessment</i> |
| <i>PSV</i>                     | <i>Peak Systolic Velocity</i>                                         |
| <i>PT</i>                      | <i>Prothrombin Time</i>                                               |
| <i>PWD</i>                     | <i>Pulsed wave Doppler.</i>                                           |
| <i>qSOFA</i>                   | <i>Quick Sequential [Sepsis-related] Organ Failure Assessment</i>     |

# List of Abbreviations *cont...*

| Abb.                                 | Full term                                                             |
|--------------------------------------|-----------------------------------------------------------------------|
| <i>RAGE</i> .....                    | <i>Receptor for Advanced Glycation End-products</i>                   |
| <i>RCT</i> .....                     | <i>Randamaized control trial</i>                                      |
| <i>ROS</i> .....                     | <i>Reactive oxygen species</i>                                        |
| <i>RRI</i> .....                     | <i>Renal Resistive Index</i>                                          |
| <i>RV</i> .....                      | <i>Right Ventricle</i>                                                |
| <i>RVEF</i> .....                    | <i>Right Ventricular Ejection Fraction</i>                            |
| <i>SCV</i> .....                     | <i>Superior vena cava</i>                                             |
| <i>SIRS</i> .....                    | <i>Systemic inflammatory response syndrome</i>                        |
| <i>SmvO<sub>2</sub></i> .....        | <i>Central mixed Venous Oxygen Saturation</i>                         |
| <i>SOFA</i> .....                    | <i>Sequential [Sepsis-related] Organ Failure Assessment</i>           |
| <i>SPAP</i> .....                    | <i>Systolic Pulmonary Artery Pressure</i>                             |
| <i>SpO<sub>2</sub></i> .....         | <i>FiO<sub>2</sub> oxygen saturation to fractional oxygen content</i> |
| <i>SV</i> .....                      | <i>Stroke volume</i>                                                  |
| <i>SVI</i> .....                     | <i>Stroke Volume Index</i>                                            |
| <i>SVO<sub>2</sub></i> .....         | <i>Central Venous Oxygen Saturation</i>                               |
| <i>SVR</i> .....                     | <i>Systemic vascular resistance</i>                                   |
| <i>SVRI</i> .....                    | <i>Systemic vascular Resistance Index</i>                             |
| <i>SVV</i> .....                     | <i>Stroke Volume Variation</i>                                        |
| <i>TAMOF</i> .....                   | <i>Thrombocytopenia-associated multiple organ failure</i>             |
| <i>TAXI</i> .....                    | <i>Transfusion and Anemia Expertise Initiative</i>                    |
| <i>TDI</i> .....                     | <i>Tissue Dopple Imaging</i>                                          |
| <i>TFPI</i> .....                    | <i>Tissue Factor Pathway Inhibitor</i>                                |
| <i>TLR</i> .....                     | <i>Toll-Like Receptors</i>                                            |
| <i>TNF-<math>\alpha</math></i> ..... | <i>Tumor Necrosis Factor Alpha</i>                                    |
| <i>tPA</i> .....                     | <i>Tissue-type Plasminogen Activator</i>                              |
| <i>TTE</i> .....                     | <i>Transthoracic echocardiography</i>                                 |

# List of Abbreviations *cont...*

| Abb.             | Full term                                   |
|------------------|---------------------------------------------|
| <i>UOP</i> ..... | <i>Urine Output</i>                         |
| <i>Upa</i> ..... | <i>Urokinase-type Plasminogen Activator</i> |
| <i>US</i> .....  | <i>Ultrasound</i>                           |
| <i>VA</i> .....  | <i>Veno-Arterial</i>                        |
| <i>VIS</i> ..... | <i>Vasoactive Inotrope Score</i>            |
| <i>VO2</i> ..... | <i>Oxygen consumption</i>                   |
| <i>VTI</i> ..... | <i>Time Velocity Index</i>                  |
| <i>VV</i> .....  | <i>Veno-Venous</i>                          |

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