Assessment of Myocardial Dysfunction and Hemodynamics By Echocardiography In critical care units

Essay

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By

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بسم الله الرحمن الرحيم

ٱقْرَأْ بِالسِّهِ رَبِّكِ ٱلَّذِي خَلَقَ (إِنَّ خَلَقَ ٱلْإِنسَنَ مِنْ عَلَقٍ (إِنَّ اَقُرَأُ وَرَبُّكَ اَقُرَأُ وَرَبُّكَ الْمُ الْمُ الْمُ يَعْلَمُ (فَيَّ الْمُ الْمُ يَعْلَمُ (فَيَّ الْمُ الْمُ يَعْلَمُ (فَيَّ الْمُ الْمُ يَعْلَمُ (فَيَّ الْمُ الْمُ يَعْلَمُ فَيَ اللَّهُ الللَّهُ اللَّهُ اللَّهُ اللَّهُ الللللْمُ اللللْمُ اللَّهُ اللللْمُ اللَّهُ الللْمُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ اللَّهُ الل

صدين الله (سورة العلق ١-٥)

Dedication

To my mother, who stood by me at every step in my life, my father the person who I respect the most and my family.

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List of Abbreviations

- **2D** = Two-dimensional.
- **3D** = Three-dimensional.
- A = Mitral A wave.
- A/D = Analogue to Digital.
- **A2C** = Apical 2 chamber view.
- A3C = Apical long axis or 3 chamber view.
- A4C = Apical 4 chamber view.
- **A5C** = Apical 5 chamber view.
- **ACP** = Acute Cor-Pulmonale.
- **AMVL** = Anterior Mitral Valve Leaflet.
- $A_0 = A_{orta}$.
- **ARDS** = Acute respiratory distress syndrome.
- **ASE** = American Society of Echocardiography
- **AVC** = Aortic valve closure.
- **BSA** = Body surface area.
- **CATH** = Catheter.
- **CF** = Colour flow Doppler.
- **CI** = Cardiac index.
- **CO** = Cardiac output
- **CSA** = Cross sectional area.
- **CW** = Continuous-wave.

- **D** = Ventricular diameter.
- **dIVC** = Distensibility index .
- **DO2** = Oxygen delivery.
- **DT** = Deceleration time
- $\mathbf{E} = \text{Mitral E wave.}$
- **EDV**= End-diastolic volume.
- **EF** = Ejection fraction.
- **ESC** = European Society of Cardiology.
- **ESV**= End-systolic volume.
- **FAC** = Fractional area change
- **Fps** = Frames/second.
- **FS** = Fractional shortening.
- **GTN** = Glyceryl trinitrate.
- **HF** = Heart Failure.
- Hz= Hertz.
- ICM= Ischemic cardiomyopathy.
- *IVC* = *Inferior vena cava*.
- **LA** = Left Atrium.
- LAP = Left atrial pressure
- LGC = Lateral gain compensation.
- LV = Left Ventricle.
- LV FAC = Left ventricular fractional area change.
- LVEDA = Left ventricular end-diastolic area.

- LVEDP = LV end diastolic pressure.
- LVEDV = Left ventricular end-diastolic volume.
- **LVEF** = Left ventricular ejection fraction.
- LVESA= Left ventricular end-systolic area.
- LVESV = Left ventricular end-systolic volume.
- LVFS = Left ventricular fractional shortening.
- LVIDd = Left ventricular internal diameter diastolic.
- LVIDs = Left ventricular internal diameter systolic.
- LVOT = LV outflow tract.
- **LVOT ACC** = Ejection acceleration time in LVOT.
- **LVOTO** = LVOT obstruction.
- LVSV = Left ventricular stroke volume.
- **MAPSE** = Mitral annular plane systolic excursion.
- **MHz** = Mega Hertz.
- **MPa** = Mega Pascal's.
- **MR** = Mitral regurgitation.
- **MRV** = Mitral valve regurgitation velocity.
- **MW** = Milli- watts.
- **PAT** = Pulmonary acceleration time.
- **Pe** = Pericardial effusion.
- **PE** = Pulmonary embolism.
- **PH** = Pulmonary hypertension.
- **PLAX** = Parasternal long axis view.

- **PLR** = Passive leg raising.
- **PMVL** = Posterior Mitral Valve Leaflet.
- **PRF** = Pulse- repetition frequency.
- **PSAX** = Parasternal short axis view.
- **PSM** = Post-systolic motion.
- **PVR** = Pulmonary vascular resistance.
- **PW** = Pulsed-wave.
- **RA** = Right Atrium.
- **RF** = Radiofrequency.
- **RV** = Right Ventricle.
- **RVOT** = Right ventricular outflow tract.
- **RVSP** = RV systolic pressure.
- **SAM** = Systolic anterior motion.
- SV = Sample volume.
- **SV** = Sample Volume.
- **SVR** = Systemic vascular resistance.
- **SVV** = SV variation.
- **TDI** = Tissue Doppler imaging.
- **TGC** = Time gain compensation.
- **TR** = Tricuspid regurgitation.
- **TTE**= Trans thoracic echo.
- **TVI** = Time velocity integral.
- **UPV** = Upper Pulmonary Vein.