

Right Ventricular Functional Recovery after Acute Myocardial Infarction by 2D Speckle-Tracking Echocardiography

Thesis

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Dedication

This work is dedicated to . . .

My beloved father, to whom I owe everything I ever did in my life and will achieve and making me the man, I am now.

My mother for always being there for me.

My wife for her support and continuous encouragement from step to other higher step, **and my lovely Twin (Omar & Youssef)** for being the light of my life.

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List of Abbreviations

Abb.	Full term
<i>1D.....</i>	<i>One-dimensional</i>
<i>2D.....</i>	<i>two-dimensional</i>
<i>3D.....</i>	<i>Three-dimensional</i>
<i>ACE.....</i>	<i>Angiotensin-converting enzyme</i>
<i>ARBs.....</i>	<i>Angiotensin receptor blockers</i>
<i>AT.....</i>	<i>Acceleration time</i>
<i>AV.....</i>	<i>Atrio-ventricular</i>
<i>CCU.....</i>	<i>Coronary Care Unit</i>
<i>CS.....</i>	<i>Coronary Sinus</i>
<i>CT.....</i>	<i>Computed Tomography</i>
<i>CVP.....</i>	<i>Central venous pressure</i>
<i>E.....</i>	<i>Strain</i>
<i>EF.....</i>	<i>Ejection Fraction</i>
<i>ERNA.....</i>	<i>Equilibrium radionuclide angiography</i>
<i>FPRNA.....</i>	<i>First-pass radionuclide angiography</i>
<i>FPS.....</i>	<i>Frames per second</i>
<i>GE.....</i>	<i>General Electric</i>
<i>HbA1C.....</i>	<i>Glycated Hemoglobin</i>
<i>IABC.....</i>	<i>Intra-Aortic Balloon Counterpulsation</i>
<i>IVC.....</i>	<i>Inferior Vena Cava</i>
<i>IVS.....</i>	<i>Interventricular septum</i>
<i>LA.....</i>	<i>Left atrium</i>
<i>LAD.....</i>	<i>Left anterior descending artery</i>
<i>LAVI.....</i>	<i>Left Atrial Volume Index</i>
<i>LCA.....</i>	<i>Left coronary artery</i>
<i>LCX.....</i>	<i>Left circumflex coronary artery</i>
<i>LHF.....</i>	<i>Left sided heart failure</i>
<i>LV.....</i>	<i>Left Ventricle</i>
<i>LV.....</i>	<i>left ventricle</i>
<i>LVEDV.....</i>	<i>LV end-diastolic volumes</i>
<i>LVESV.....</i>	<i>LV end-systolic volumes</i>

List of Abbreviations (Cont...)

Abb.	Full term
<i>MDCT</i>	<i>Multidetector computed tomography</i>
<i>MPA</i>	<i>Main Pulmonary Artery</i>
<i>MRI</i>	<i>Magnetic Resnance Imaging</i>
<i>NCEP</i>	<i>National Cholesterol Education Program</i>
<i>PA</i>	<i>Pulmonary artery</i>
<i>PADP</i>	<i>Pulmonary Artery End-Diastolic Pressure</i>
<i>PDA</i>	<i>Posterior descending artery</i>
<i>PV</i>	<i>Pulmonary Valve</i>
<i>PVR</i>	<i>Pulmonary vascular resistance</i>
<i>PWT</i>	<i>Posterior wall thickness</i>
<i>RA</i>	<i>Right Atrium</i>
<i>RAA</i>	<i>Right Atrial Appendage</i>
<i>RCA</i>	<i>Right coronary artery</i>
<i>RHF</i>	<i>Right sided heart failure</i>
<i>ROI</i>	<i>Region of interest</i>
<i>RV</i>	<i>Right ventricle</i>
<i>RVOT</i>	<i>Right ventricular outflow tract</i>
<i>RVSP</i>	<i>Right Ventricular Systolic Pressure</i>
<i>S'</i>	<i>Systolic TV annular excursion velocity</i>
<i>SA</i>	<i>Sino-atrial</i>
<i>SPAP</i>	<i>Systolic Pulmonary Artry Pressure</i>
<i>SR</i>	<i>Strain rate</i>
<i>SVC</i>	<i>Superior Vena Cava</i>
<i>SWT</i>	<i>Septal wall thickness</i>
<i>TAPSE</i>	<i>Tricuspid Annular Plane Systolic Excursion</i>
<i>TR</i>	<i>Tricuspid regurgitation</i>
<i>WMSI</i>	<i>Wall motion Scoring Index</i>

AIM OF THE WORK

To evaluate the right ventricular function & its recovery (after 3 to 6 months) in patients with acute ST segment elevation myocardial infarction treated with successful reperfusion therapy using speckle tracking derived 2D longitudinal strain of the RV free wall.