POTENTIALITIES OF NON-INVASIVE DIAGNOSES OF ANOMALOUS CORONARY ARTERIES BY MULTI-SLICE CT ANGIOGRAPHY

Essay submitted in partial fulfillment of Master Degree in Radiodiagnosis by

Mayada Mohamed Diaa
MB BCh

Supervised by

Dr. Moataz M. Samy El-Beblawy
Assistant Professor of Radiodiagnosis
Faculty of Medicine, Ain-Shams University

Dr. Lobna AbdelMoneim Habib
Assistant Professor of Radiodiagnosis
Faculty of Medicine, Ain-Shams University

Faculty of Medicine
Ain-Shams University
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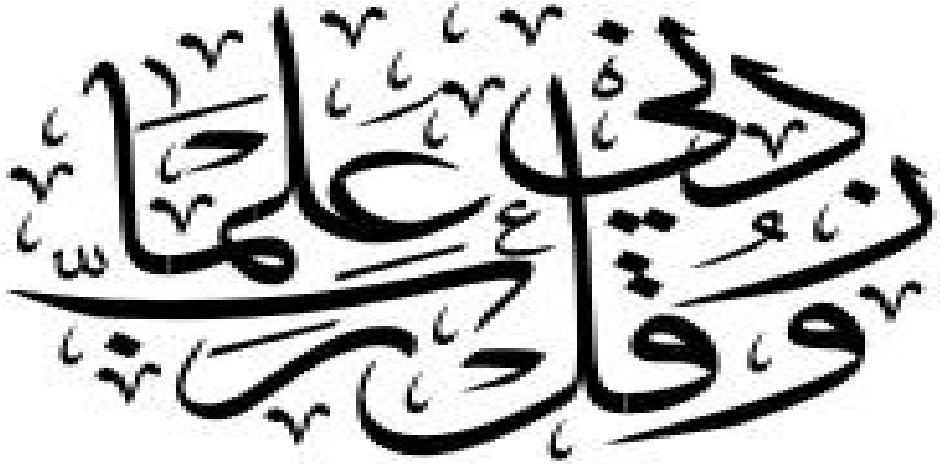
بسم الله الرحمن الرحيم



صدق الله العظيم

TO

MY FAMILY

For Their Abundant Support, For Their Patience And Understanding, And For Their Love.

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LIST OF ABBREVIATIONS

Abbreviation	Description
A	Aorta
ALCAPA	Anomalous Origin Of The Coronary Artery From The Pulmonary Artery
Ao	Aortic Root
AVGA	Atrio Ventricular Groove Artery
bpm	Beat Per Minute
cc	Cubic Centimeter
CS	Coronary Sinus
CT	Computed Tomography
CTA	Computed Tomography Angiography
ECG	Electrocardiogram
HU	Hounsfield Unit
IV	Intravenous
kV	Kilovolt
kVp	Kilovolt Peak
LA	Left Atrium
LAD	Left Anterior Descending
LCA	Left Main Coronary Artery
LCx	Left Circumflex Artery
LV	Left Ventricle
mA	Milliamp
mAs	Milliamp Seconds
MDCT	Multi-Detector Row Computed Tomography
mg	Milligram
MIP	Maximum-Intensity-Projection

Abbreviation	Description
mL	Milliliter
mm	Millimeter
ms	Millisecond
MSCT	Multi-Slice Computed Tomography
mSv	Millisievert
OM	Obtuse Marginal
PA	Pulmonary Artery
PDA	Posterior Descending Artery
PLB	Posterior Lateral Branch
RA	Right Atrium
RAH	Right Anterior Head
RCA	Right Coronary Artery
RV	Right Ventricle
RVOT	Right Ventricular Outflow Tract
s	Second
SAN	Sinoatrial Node Branch
SD	Standard Deviation
VR	Volume-Rendered

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CHAPTER I

INTRODUCTION AND AIM OF WORK

INTRODUCTION

Congenital abnormalities of the coronary arteries are an uncommon but important cause of chest pain and, in some cases of hemodynamically significant abnormalities, sudden cardiac death (**Kim et al., 2006).**

Clinical presentations depend on the specific anatomy. Most coronary artery anomalies are benign and clinically insignificant; however, some anomalies are potentially significant and can lead to heart failure and even death (**Earls , 2006).**

The prevalence of coronary arteries congenital anomalies is 1 to 2 % in the general population. Although the spectrum of their clinical presentation is very broad from total iniquity to lethal, anomalies of coronary arteries need to be recognized by clinicians in certain circumstances: they are the first cause of death in young adults under physical exercise and an abnormal