Impact of Ventricular Septal Defect Diameter on Growth and Chest Infections in Children

Thesis

Submitted for Partial Fulfillment of Master Degree
In Pediatrics

By

Mohammed Awad Bessar
M.B.B.Ch (2011)

Under Supervision of

Prof. Dr. Alyaa Amal Kotby
Professor of Pediatrics
Faculty of Medicine - Ain Shams University

Prof. Dr. Wafaa Abd El Samie Kandeel
Professor of Biological Anthropology
National Research Centre

Asst. Prof. Dr. Waleed Mohamed ElGuindy
Assistant Professor of Pediatrics
Faculty of Medicine - Ain Shams University

Faculty of Medicine
Ain Shams University
2016

سورة البقرة الآية: ٣٢

First and foremost, I feel always indebted to **ALLAH,** *the Most Kind and Most Merciful.*

I'd like to express my respectful thanks and profound gratitude to **Prof. Dr. Alyaa Amal Kotby,** *Professor of Pediatrics - Faculty of Medicine- Ain Shams University for her keen guidance, kind supervision, valuable advice and continuous encouragement which made possible the completion of this work, Personally I would like to express my gratitude for the valuable life lessons I learnt from her great experiences and her highly professional attitude and organization, I'm really blessed for this great opportunity to be under her supervision*

I am also delighted to express my deepest gratitude and thanks to **Prof. Dr. Wafaa Abd El Samie Kandeel,** *Professor of Biological Anthropology, National Research Centre, for her kind care, continuous supervision, valuable instructions, constant help and great assistance throughout this work. I must admit that I loved working with such an honorable charachter*

I am deeply thankful to **Asst. Prof. Dr. Waleed Mohamed ElGuindy,** *Assistant Professor of Pediatrics, Faculty of Medicine, Ain Shams University, for his great help, active participation and guidance. Personally I'm very lucky for dealing with and learning from such a decent professor*

I wish to introduce my deep respect and thanks to **Dr. Khaled Helmi El-Wakeel and Dr. Naglaa Abd El Halim Hassan** *lecturers of Biological Anthropology, National Research Centre, for their supervision and cooperation.*

I would like to express my hearty thanks to all my family and beloveds for their support till this work was completed.

Mohammed Awad Bessar

Contents

Contents *(Cont….)*

List of Abbreviations

Abb.		Meaning
CHD	:	Congenital heart diseases
ASD	:	Atrial septal defect
VSD	:	Ventricular septal defect
TGA	:	Transposition of the great arteries
TOF	:	Tetralogy of Fallot
DORV	:	Double outlet right ventricle
PTA	:	Persistent truncus arteriosus
Qp/Qs	:	Pulmonary-Systemic Flow Ratio
ECG	:	Electrocardiography
PDA	:	Patent ductus arteriosus
DIA	:	Interatrial defects
TEE	:	Trans-oesophageal echocardiography
ACE	:	Angiotensin-converting enzyme
MRI	:	Magnetic resonance imaging
A-V	:	Atrioventricular
HC	:	Head circumference
CC	:	Chest circumference
GH	:	Growth hormone
PEM	:	Protein-energy malnutrition
WHO	:	World Health Organization
BMI	:	Body mass index
DVSD/DAR	:	Ventricular septal defect size/diameter of aortic root
LVOT	:	Left ventricular outflow tract diameter
LVOT VTI	:	LVOT subvalvular velocity time integral

Abb.		Meaning
RVOT	:	Right ventricular outflow tract diameter
RVOT VTI	:	RVOT subvalvular velocity time integral
Ratio 1	:	Minimum VSD diameter
Ratio 2	:	Minimum VSD diameter/ Aortic root diameter
Ratio 3	:	Mean VSD diameter/ Aortic root diameter
SPSS	:	Statistical Program for Social Science
SD	:	Standard deviation
ANOVA	:	A one-way analysis of variance
SPSS	:	Statistical Program for Social Science

List of Tables

List of Figures

Introduction

Aim of the Work

Chapter (1)

Ventricular Septal Defect