

Nutritional assessment of children with congenital heart diseases in the Pediatric Cardiology Clinic, Pediatric Hospital, Ain Shams University

Thesis

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List of Abbreviations

AA	Arachidonic acid
ACEIs	Angiotensin-Converting Enzyme Inhibitors
ARBs	Angiotensin II Receptor Blockers
AS	Aortic stenosis
ASD	Atrial septal defect
AVSD	Atrioventricularseptal defect
BMI	Body mass index
BUN	Blood urea nitrogen
CAVC	Common atrioventricular canal
CDC	Center of disease control
CHDs	Congenital heart diseases
CHF	Congestive heart failure
CHO	Carbohydrate
COA	Coarctation of aorta
CPB	Cardiopulmonary bypass
CRRT	Continuous renal replacement therapy
DEXA	Dual energy x-ray absorptiometry
DHA	Docosaehaenoeic acid
EBM	Expressed breast milk
EFAD	Essential fatty acid deficiency
EN	Enteral nutrition
FFQ	Food frequency questionnaire
FTT	Failure to thrive
GERD	Gastroesophageal reflux disease
GH	Growth hormone
GI	Gastrointestinal
HB	Hemoglobin
HCT	Hematocrit
HF	Heart failure
HFA	Height for age
IBW	Ideal body weight
IGF-1	Insulin growth-factor 1
IV	Intravenous
Kcal	Kilo calorie
LBW	Low birth weight
LCTGS	Long chain triglycerides
Lt	Left



 List of Abbreviations

MUAC	Mid upper arm circumference
MCT	Medium chain triglycerides
MR	Mitral regurge
NCHS	National Center for Health Statistics
NPO	Nothing per os
NYHA	...New York Heart Association
PD	Peritoneal dialysis
PDA	Patent ductusanteriorus
PEM	Protein energy malnutrition
PN	Parentral nutrition
PS	Pulmonary stenosis
RDA	Recommended daily allowance
RNI	Recommended nutrient intake
REE	Resting energy expenditure
Rt	Right
RV	Right ventricle
SD	Standard deviation
SFT	Skin fold thickness
SMA	Superior mesenteric artery
TAPVR	Total anulous pulmonary venous return
TEE	Total energy expenditure
TGA	Transposition of great arteries
TOF	Tetrology of fallot
VSD	Ventricular septal defect
WFA	Weight for age
WHO	World health organization



Introduction

Congenital heart disease (CHD) refers to any anatomic defect in the heart or major blood vessels that are present at birth (*Smith, 2001*). Cardiac abnormalities occur with an incidence of 8 per 1000 living births and represent 25% of all congenital malformations (*Nemer et al., 2006*). Congenital cardiovascular malformations present in any society with an enormous burden of grief and expenses. About 8% of all deaths during the first year of life are due to CHD and account for a third or more of infant deaths due to birth defects, more than that for any other congenital anomaly including neural tube defects (*Bailey and Berry, 2005*).

Growth in children with congenital heart disease (CHD) is often compromised, especially in those with either heart failure or cyanosis, and symptomatic infants are the worst to be affected (*Venugopalan et al., 2001*). Cardiac malformations are undoubtedly responsible for malnutrition. In some instances, the growth delay can be relatively mild, whereas in other cases, the failure to thrive can result in permanent physical or developmental impairment (*Wheat, 2002*). Malnutrition may then significantly undermine the outcome of corrective surgical operations and postoperative recovery (*Forchielli et al., 1994*).