



Role of Multi-Slice Computed Tomography in Assessment of Non-Cyanotic Congenital Heart Disease

Essay

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Radio-diagnosis

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List of Abbreviation

- 3D**Three Dimensions
- aA**Ascending Aorta
- ACV**.....Anterior Cardinal Vein
- ALARA** ...AS Low as Reasonable Achievable
- ANT**.....Anterior
- Ao**Ascending Aorta
- AP**.....Arterial Pole
- APW**.....Aorto-pulmonary Window
- Ar**Aortic Arch
- AR**Aortic Regurgitation
- ASA**Atrial Septal Aneurysm
- ASD**Atrial Septal Defect
- AV**Aortic Valve
- AVS**Atrioventricular Septum
- AVSD**Atrioventricular Septal Defect
- CCV**.....Common Cardinal Vein;
- CHD**Congenital Heart Disease
- CoA**Coarctation of Aorta

CPR.....Curved Planer Reformation
CS.....Coronary Sinus
CT.....Computed Tomography
dA.....Descending Aorta
DL.....Dextral Looping
ECG.....Electrocardiogram
Fig.....Figure
FO.....Foramen Ovlae
ILB.....Inferior Limbic Band
Is.....Aortic Isthmus
IV.....Interventricular Septum
IVC.....Inferior Vena Cava
LA.....Left Atrium
LAA.....Left Atrial Appendage
LAD.....Left Anterior Descending
LCX.....Left Circumflex Artery
LI.....Left Inferior
Lig.artLigmantum Arteriosum
LPA.....Left Pulmonary Artery
IPA.....Left Pulmonary Artery

LSLeft superior

LSCA.....Left Subclavian Artery

LV.....Left Ventricle

LVOT.....Left Ventricular Outflow Tract

MDCTMultidetector Computed Tomography

MIPMaximum Intensity Projections

MPAMain Pulmonary Artery

MPR.....Multi-planar Reformations

MRI.....Magnetic Resonance Imaging

MSCT.....Multislice Computed Tomography

MSCTA...Multislice computed tomography angiography

mSv.....Millisievert

MVMitral Valve

PAPVR....Partial Anomalous Pulmonary Venous Return

PCV.....Posterior Cardinal Vein

PDA.....Patent Ductus Arteriosus

PDA.....Posterior Descending Artery

PFOPatent Foramen Ovale

POST.....Posterior

PSPulmonary Stenosis

PTPulmonary Trunk
PVPulmonary Valve
RARight Atrium
RAA.....Right Atrial Appendage
RCA.....Right Common Coronary Artery
RI.....Right Inferior
RoRoot of Aorta
RPA.....Right Pulmonary Artery
rPARight Pulmonary Artery
RS.....Right superior
RVRight Ventricle
RVOT.....Right Ventricular Outflow Tract
S3.....Third Heart Sound
S4.....Fourth Heart Sound
SLB.....Superior Limbic Septum
SSCTSingle Slice Computed Tomography
SVCSuperior Vena Cava
TGA.....Transposition of Great Arteries
TTETransthoracic Echocardiography
TV.....Tricuspid Valve

UVUmbilical Vein

VIT VVitelline Vein

VPVenous Pole

VRVolume Rendering

VSDVentricular Septal Defect

1- INTRODUCTION

Congenital heart defects are among the most common birth defects (**Kulkarni et al., 2015**). Congenital cardiovascular disease has an incidence of between 4 and 50 per 1,000 live births (**Tricarico et al., 2013**).

Non-cyanotic congenital heart disease represents 70% of all congenital heart disease, ventricular septal defects (most common), patent ductus arteriosus, atrial septal defect and pulmonic stenosis and coarctation of aorta (**Yamamoto et al., 2004**).

Transthoracic echocardiography (TTE) is the first imaging modality in congenital heart disease; it provides full intracardiac anatomic and hemodynamic details. However, its diagnostic role is limited by poor echo windows in older children and in postoperative patients by scars, chest wall deformities, lung artefact (**Kulkarni et al., 2015**).

Invasive cardiac catheterization has been, for many years, the gold standard for the anatomical assessment of CHD in children, having the potential to anatomical and hemodynamic evaluation. But on the other hand it has disadvantages (vessel dissection, stroke, pseudo aneurysm formation, costs of hospital stay, patient discomfort, radiation dose, and contrast medium). Moreover, cardiac