

ROLE OF CARDIAC MRI IN THE ASSESSMENT OF PULMONARY VASCULAR ANOMALIES IN PEDIATRIC PATIENTS WITH CONGENITAL HEART DISEASE

Thesis

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Abstract

This technique has the great potential of providing anatomical and hemodynamic data not confidently obtainable by other currently used imaging modalities. It could disclose changes not seen by other techniques, and can be used to verify findings seen with other modalities. Some patients with congenital heart disease present with clinical problems related to airway compression by anomalous extra cardiac vascular channels. MR has the advantage of delineating the relation between the tracheobronchial tree and the anomalous vessels.

Keyword: PD, PCA, AO, BSSTP

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LIST OF ABBREVIATIONS

MRI	Magnetic resonance imaging
CT	Computed tomography
3D	Three dimensional
TE	Echo time
TR	Repetition time
RT	Radiofrequency
TTE	Fast field echo
TID	Free induction decay.
SE	Spin echo
GE	Gradient echo
SNR	Signal to noise ratio
FOV	Field of view
PD	Proton density
TOF	Time of flight
Gd DTPA	Gadopentate dimeglumine
2D	Two dimensional
PCA	Phase contrast angiography
US	Ultrasound
PW	Pulsed wave

LA	Left atrium
RV	Right ventricle
RA	Right atrium
LV	Left ventricle
PA	Pulmonary artery
AO	Aorta
TTE	Transthoracic echo
TEE	Trans esophageal echo
CHD	Congenital heart disease
CMR	Cardiac magnetic resonance
ECG	Electrocardiogram
VCG	Vector cardiogram
LMB	Left main bronchus
RMB	Right main bronchus
SVC	Superior vena cava
IVC	Inferior vena cava
RPA	Right pulmonary artery
LPA	Left pulmonary artery
AZY	Azygous vein
BSSTP	Balanced steady state free precession

APM	Anterior papillary muscle.
MB	Moderator band
CS	Coronary band
TV	Tricuspid valve
MV	Mitral value
ASD	Atrial septal defect
VSD	Ventricular septal defect
LVOT	Left ventricle outflow tract
RVOT	Right ventricular outflow tract
OLA	Vertical long axis
HLA	Horizontal long axis
SA	Short axis
4CH	Four chamber
AV	Atrioventricular
LMT	Left main trunk
LAD	Left anterior descending
LCX	Left circumflex
RCA	Right coronary artery
PDA	Patent ductus arteriosus
TOF	Tetralogy of Fallot