Role of Electrocardiogram-Gated Multidetector Computed Tomography in diagnosis of congenital heart disease.

Thesis

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Marwa Ali Ibrahim Gamal El-Den

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List of Abbreviations

AEC	:	Automated exposure control
ASDs	:	Atrial septal defects
AV	:	Aortic valve
AV	:	Atrioventricular
CHD	:	Congenital heart disease
CMR	:	Cardiac magnetic resonance
CPR	:	Curve planar reformation
CS	:	Coronary sinus
ECHO	:	Echocardiography
GCV	:	Great cardiac vein
IAA	:	Interrupted Aortic Arch
IVC	:	Inferior vena cava
LA	:	Left atrium
LCA	:	Left coronary artery
LMV	:	Left marginal vein
MAPCAs	:	Major aorta pulmonary collateral arteries
MDCT	:	Multidetector computed tomography
MIP	:	Maximum intensity projection
MPA	:	Main pulmonary artery
MPR	:	Multiple planar reformation
MV	:	Mitral valve
OMA	:	Obtuse marginal artery
PAPVR	:	Partial anomalous pulmonary venous connection
PDA	:	Patent ductus arteriosus
PDA	:	Posterior descending artery
PIV	:	Posterior interventricular vein
PVLV	:	Posterior vein of the left ventricle
RA	:	Right atrium

List of Abbreviations (Cont.)

RI	:	Ramus intermedius
RV	:	Right ventricle
SVC	:	Superior vena cava
SVC	:	Superior vena cava
TAPVR	:	Total anomalous pulmonary venous connection
VR	:	Volume rendering
VSD	:	Ventricular septal defect

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Abstract

Echocardiography considered the first line in diagnosis of congenital heart anomalies with some limitation in assessment of extra cardiac great vessels anomalies. The ECG gated MDCT angiography can be complementary to the cardiac Echo and replaced the invasive catheterization and the cardiac MRI when its use is contraindicated.

In our study the role of ECG gated Multi-detector CT angiography in the evaluation of congenital heart and extra cardiac great vessels anomalies was assessed, it enrolled 30 patients (13 males and 17 females) with an age range between 3 days - 18 years.

In conclusion we find that ECG gated MDCT angiography is very helpful in assessment of cardiac and extra cardiac great vessels anomalies.

Keyword: MDCT, ECG, congenital.