STRESS ECHOCARDIOGRAPHIC STUDY REPORT

Name:	**ARENAS, CHRISTIAN JOY G.**			Age:	24	Date:	March 01, 2019
Address:	QUEZON CITY			Sex:	MALE	RC:	
Ref. MD:	DR. MARLOU MENDOZA			Weight:	72.8 kg	HR:	74 Per min
Hospital	OUR LADY OF LOURDES HOSPITAL			Height:	175 cm	SBP:	120 mmHg
Study No:	SE 19-03-004/IE33	Technician	Con/Aj	BSA:	1.88 M^2	DBP:	80 mmHg

LEFT VENTRICULAR DIMENSION (LV)

Parameter		Normal Range
LVEDD	4.8	
LVESD	2.8	
LVEDD/BSA	2.6	2.2-3.1 cm/m^2
LVESD/BSA	1.5	1.4-2.1 cm/m^2
IVSD	0.8	0.6-1.0 cm
IVSS	1.3	
PWD	0.9	0.6 – 1.0 cm
PWS	1.7	
LV Mass In.	73	49-115 gm/m^2
LV Rel. WT	0.38	0.24 –0.42 cm
LVOT	2.2	1.8– 2.4 cm
EPSS	0.6	< 0.7 cm

RIGHT VENTRICULAR DIMENSION

RVD mid	3.0	2.7 – 3.3 cm
RVWT	0.5	< 0.5 cm

LV VOLUME & SYSTOLIC FUNCTION

Parameter		Normal Range
LVEDV	108	67-155 ml
LVESV	30	22 -58 ml
Stroke Vol.		
Bi-plane	78	70-100 ml
Doppler	65	73-100 ml
C.O	4.8	>4.0 L/Min
C.I	2.6	>2.5 L/min/m^2
Eject. Fraction		
M-Mode	72	> 55 %
Simpson's	72	> 55 %
FS	41	25-43 %
LVET	301	265 - 325 msec

RVOT1	1.4	2.5 – 2.9 cm
RVFAC	60	32 - 60 %

ATRIA AND GREAT VESSELS

Parameter		Normal Range
LA (AP)	3.1	
LA / BSA	1.7	1.5 – 2.3 cm/m^2
LA Vol. In.	29	<34 ml/m^2
RA	3.6	2.9 – 4.5 cm
RA / BSA	1.9	1.7-2.5 cm/m^2
AORTA		
Annulus	1.8	1.4 – 2.6 cm
Sinus Val.	2.6	2.1 – 3.5 cm
ST Junct.	2.5	1.7 – 3.4 cm
Ascending	2.3	2.1 – 3.4 cm
ARCH	2.3	2.0 – 3.6 cm
MAIN PA	1.7	1.5 – 2.1 cm
IVC Diameter	2.0/0.8	1.5 – 2.5 cm
IVC Collapse%	60	> 50 %
MV Annulus	3.1	1.8 – 3.1 cm
TV Annulus	2.8	1.3 – 2.8 cm
PV Annulus	1.5	1.7 – 2.3 cm

DOPPLER STUDY : HEMODYNAMICS

	Velocity m/sec		Peak Grad mmHg		Valve Area cm^2	VTI(cm)	VC(cm)	REGURGITATION %	Jet Area cm^2	Volume(ml)
LVOT/ AV	0.8	1.3	2.5	6.5						
Mitral Valve	0.6	0.4	1.6	0.6						
Tricuspid Valve	0.5	0.2	1.0	0.3						
RVOT /PA	0.8	1.0	2.6	3.7						
PAT 137 msec			MPAP (PAT)				SPAP (TR Jet)			mmHg

DOPPLER STUDY:(LV) DIASTOLIC FUNCTION

PUL. VENOUS VELOCITY			MITRAL INFLOW			MITRAL ANNULAR TDI				
Systolic	0.5	m/sec	E wave DT	179	msec	Lateral E'	14	cm/sec	E/E' ratio	4
Diastolic	0.6	m/sec	IVRT	81	msec	A'	7	cm/sec		
S/D ratio	<1	m/sec	A Wave dur	113	msec	Medial E'	10	cm/sec	E/E' ratio	6
Ar Velocity	0.2	msec	Adur - Adur		msec	A'	6	cm/sec		
Ar Duration	85									

** Normative values for cardiac chambers are based on ASE recommendations for Chamber Quantification JASE Dec 2005; Otto Textbook of Clinical Echocardiography; 3rd Edition, Reynolds The Echocardiograher's Pocket Reference 2nd Ed.*

** LVMI calculated using Linear method. CO and CI values are based on Doppler derived Stroke Volume. LVMI for LV Mass Index, LV RWT for LV Relative wall thickness, RVFAC for RV Fractional Area Changes, RVOT1 Above aortic valve.*

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Baseline 2DED
Chambers and Valves
Normal left ventricular cavity size with normal wall motion, contractility and systolic function
Normal left ventricular mass index and relative wall thickness
Normal right ventricular cavity size with normal wall motion and contractility
Normal left atrial size and volume index
Normal right atrium, main pulmonary artery and aortic root dimensions
Structurally normal tricuspid, mitral, pulmonic and aortic valves
Intact interatrial and interventricular septum
No intracardiac thrombus and no pericardial effusion noted

COLOR FLOW DOPPLER STUDY
No mosaic color flow display across the valves, septae and great vessels
Normal mitral annular velocity. E/E' of 5
Normal mean pulmonary artery pressure by right ventricular acceleration time

Baseline ECG: Normal
Baseline Parameters: BP: 120/80 mmHg HR: 74 beats/min

TET: The patient underwent treadmill exercise test using BRUCE protocol and was able to achieve a maximum workload equivalent to 10.0 METS. The peak SBP and HR were 140 mmHg and 181 beats/min (92% of MPHR), respectively. The procedure was terminated due to Gen. Leg Fatigue. No angina was reported.

TET-ECG: ECG studies done during TET and recovery showed no significant ST-T wave changes during exercise and recovery. No arrhythmias noted.

TET-ECHO: Serial echo studies done immediately post-exercise showed uniform increase in wall motion and contractility of all myocardial segments. No new wall motion abnormalities noted.

Conclusion:
Baseline 2DED:
Normal left ventricular dimension with normal wall motion, contractility and systolic function
Normal pulmonary artery pressure

TET-ECG: Normal TET ECG at 10.0 METS

TET-ECHO: Normal TET ECHO at 10.0 METS

Original Signed
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LEVEL 3 ECHOCARDIOGRAPHER

J.N.T./SONOGRAPHER

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