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pulse tissue Doppler

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pulse tissue Doppler (PTD)

PTD Doppler M Mode 2D

PTD

(Early peak velocity/ Late peak velocity) E/A PTD

DT (Deceleration time) (P< /) RT (relaxation time) (P< /)

E/A (P< /) late peak velocity(Am) (P< /)

(P< / r= /) E/A

Longitudinal

E/A RT

PTD

pulse tissue Doppler :

Congestive Heart Failure ()

hasannamazi@yahoo.com :

[(BP ≥ /)] ()

[() after load
remodeling geometry
Valvular regurgitation ()
Valvular heart disease
ECC ()
wall motion abnormality pulse Doppler
(pulmonary hypertension COPD) tissue Doppler Imaging
Congestive Heart Failure ()
() direction
Doppler pulse tissue Doppler
()
PTD ()
HR ()
Longitudinal
Doppler M-mode 2D ()
pulse tissue Doppler
Vingmed system five ultrasound system ()
tissue Doppler Longitudinal
3.5 MHS
Septal wall M-Mode pulse tissue Doppler
left ventricular post wall right ventricular ant wall
(Dimension Left Ventricular End Diastolic) LVEDD
(LV End Systolic Dimension) LVESD
left ventricular fractional shortening
TAPSE

Em peak(m/s)	[S	(Tricuspid Annular Plane Systolic Excursion)
Am peak(m/s) [myocardial early peak velocity]	2D	TAPSE ()
[myocardial late peak velocity]		apical four chamber
[deceleration time] DTm(ms) Em/Am		
relaxation time] RTm(ms)	RV	
[Em Sm		
mean ± SD		EF=3.2×TAPSE(mm)
SPSS 11.5	Kaul	() RV
t Chi-square		pulse Doppler
P< /	sample volume	apical four chamber
		Tip
	A-peak velocity	E-peak velocity
	(Isovolumic relaxation time) IVRT	E/A
	(Diastolic filling period) DFP	
	DFP E/A Apeak Epeak	
(heart rate)	pulse tissue Doppler	()
BMI	3.5 MHS	
(P< /)	sample volume	apical four chamber
	lateral mitral annulus	
2D M Mode		LV
) RV ant wall thickness	sample volume	
(P< / / ± / / ± /	RV	lateral tricuspid annulus
) LV post wall thickness	pulse tissue Doppler	
(P< / / ± / / ± /	Sm	
/ ± /) LVEDD	Am Em	
(P< / ±	Sm peak (m/s) :	
	PCT (mm) [myocardial systolic peak]	
left ventricular- LVESD	QRS	precontraction time]
TAPSE fractional shortening	contraction time] CT(mm) [Sm	

	/ ± /) peak A		
E/A ratio (P < /	/ ± /	/ ± /	(/ /)
	/ ± /	/ ± /	
		(P < /	
			BMI
PTD			
(P < /) Em peak			Heart rate
(P < /) RTm	(P < /) Em/Am ratio		
PTD	peak A		
Em/Am ratio (P < /) Am peak	/ ± /	/ ± /)	
(P < /) RT	(P < /) DT	(P < /)	/ ± /) E/A ratio (P < /
			/ ± /

pulse tissue Doppler

P-Value			
P < /	/ ± /	/ ± /	LV mitral lateral annulus
NS	/ ± /	/ ± /	
P < /	/ ± /	/ ± /	
NS	± /	± /	
P < /	± /	/ ± /	
NS	/ ± /	/ ± /	
NS	/ ± /	/ ± /	
NS	/ ± /	/ ± /	
NS	/ ± /	/ ± /	RV mitral lateral annulus
P < /	/ ± /	/ ± /	
P < /	/ ± /	/ ± /	
P < /	/ ± /	/ ± /	
P < /	± /	/ ± /	
NS	/ ± /	/ ± /	
NS	/ ± /	/ ± /	
NS	/ ± /	/ ± /	

(P< /)

PTD

RV

:

(.)

Em

Em

Myslinski

mild to mod

(P< / r= /)

Em/Am

Em/Am

peak velocity

(P< / r= /)

RV filling

TE/TA

()

(.)

LV filling

RTm

RTm

(P< / r= /)

PTD

DTm Am

Cicala

PTD

Em/Am

(P< /) DTm (P< /) RTm (P< /)

(P< /) Em peak

()

PTD

M Murat Tumuklu

PTD

lat tricuspid annulus

E/A (P< /) peak A (P< /) peak E

mid RV free wall PTD (P< /)

E/A (P< /) A (P< /) E

(P< /) peak (P< /)

Strain Imaging PTD

Doppler

(.)

DT (P< /)

RV peak velocity

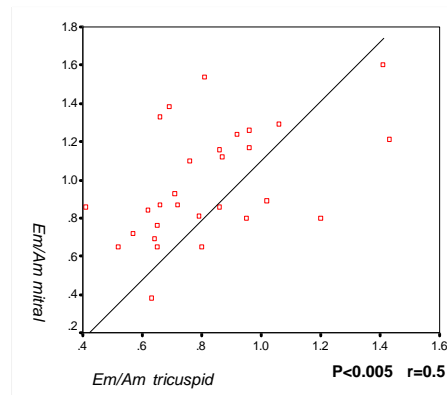
E/A

(P< /)

(right ventricular wall impairment)

SV

peak filling rate



Em/Am

overload Longitudinal

Longitudinal

PTD

Em/Am ventricular relaxation Em :

RTm DTm atrial activity Am

Em/Am < (P< /)

() M Murat Tumuklu Cicala RTm (P< /)

isometric relaxation

PTD (P< /) DTm (P< /)

TAPSE

Ventricular interaction PTD

pulse tissue Doppler filling filling

Doppler RTm Em/Am Em peak

DTm Am peak

video tape functional intraction Em/Am

passive

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