

## Assessment of regional and global myocardial systolic function by 2D longitudinal speckle tracking in elderly patients with normal LV function

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Ageing is accompanied by cardiac biological and structural alterations which result in a decrease in diastolic and systolic myocardial functions. This study was conducted to assess *age-related* subclinical changes in left ventricular function using *Strain Imaging* in healthy elderly individuals with normal left ventricular function by conventional methods (Simpson's, eyeballing). The exclusion criteria were LV myocardial abnormality, valve disease, and atrial fibrillation. Our study included 100 patients divided in 4 groups according to age in years  $\leq 70$ , 71 to 80, 81 to 90,  $\geq 91$ ; with 25 patients in each group

### 2D Strain:

**Comparison of 2D strain values between groups:** Global longitudinal strain was significantly lower in elderly subjects ( $\leq 70$ -17.95; 71 to 80-17.10; 81 to 90-16.93;  $\geq 91$ -15.11) **P value < 0.05**. There was significant difference in longitudinal basal, Longitudinal mid, Longitudinal apical region strain rate, showing decreasing trend in all with increase in age (Table).

Table:- Comparison of Longitudinal basal, mid and apical measurements and Global stain between age-group.

Variables	Age-groups (yrs)	Mean	SD	P value
Longitudinal basal	$\leq 60$	17.90	0.31	<0.05
	61 to 70	17.07	0.56	<0.05
	71 to 80	16.94	0.60	<0.05
	$\geq 81$	15.06	0.65	<0.05
Longitudinal mid	$\leq 60$	17.96	0.33	<0.05
	61 to 70	17.09	0.58	<0.05
	71 to 80	16.94	0.62	<0.05
	$\geq 81$	15.14	0.58	<0.05
Longitudinal apical	$\leq 60$	17.97	0.37	<0.05
	61 to 70	17.15	0.63	<0.05
	71 to 80	16.92	0.62	<0.05
	$\geq 81$	15.12	0.80	<0.05
Global stain	$\leq 60$	17.95	0.30	<0.05
	61 to 70	17.10	0.56	<0.05
	71 to 80	16.93	0.59	<0.05
	$\geq 81$	15.11	0.65	<0.05

Global longitudinal strain was significantly lower in elderly subjects ( $\leq 70$ -17.95; 71 to 80-17.10; 81 to 90-16.93;  $\geq 91$ -15.11) **P value < 0.05**. There was significant difference in longitudinal basal, Longitudinal mid, Longitudinal apical region strain rate, showing decreasing trend in all with increase in age (Table).

### Biography

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