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**"ESTABLISHING A NOMOGRAM OF ECHOCARDIOGRAPHIC
PARAMETERS IN ADULT GROUP IN SOUTH INDIAN POPULATION
"**

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ESTABLISHING A NOMOGRAM OF ECHOCARDIOGRAPHIC PARAMETERS IN ADULT GROUP IN SOUTH INDIAN POPULATION

Abstract

Background: Echocardiography has become a part of routine cardiac evaluation for all age groups and echocardiographic evaluation serves as the excellent imaging modality for assessing the cardiac anatomy, physiology and functioning of heart in clinical practice. Currently available echocardiographic reference values are derived mainly from North American and European population studies, and no echocardiographic reference values are available for the South Indian population.

Objectives: To establish the normal reference range of echocardiographic parameters including the segmental and global strain in adult group in South Indian population.

Methods: 230 healthy adult population visiting the cardiology department with normal ECG and physical examination, aged between 20-60 years of age were enrolled for the study. Patients with coronary artery disease, lung disease, liver disease, neuromuscular disease or genetic syndrome were excluded. We measured the cardiac chamber including both right and left ventricles as well as atria according to current echocardiography guidelines and compared values according to gender and age groups.

Results: In the present study, a total of 230 subjects were ultimately enrolled. We employed the mean \pm SD in establishing the normal reference range for our population which ensures that almost 95% of subjects are included (i.e. 5th to 95th percentile). Most of the cardiac dimension and diameters were slightly higher in men compared to women, but when normalized to BSA most of this variation was not present. However, parameters such as LVEF ($42.57 \pm 5.28\%$), RVFAC ($25.63 \pm 8.06\%$) was higher in females compared to that of men.

Conclusion: Our study is one of its kind to enroll the population of southern region of India and establish the normal reference range for the echocardiographic parameters as well as strain parameters for the population.